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ABSTRACT

The nine reports included in this monograph are: (1) "Phonemic Awareness/Multisensory Instruction: An Intervention for Kindergarten Children at Risk in Pre-Reading" (Marcia Anselmo and Patricia Kulp); (2) "The Effects of Reading Aloud vs. Sustained Silent Reading on Student Comprehension" (Karen Border and Mark Ranski); (3) "An Investigation into the Reading and Writing Attitudes of Second Graders Who Have Participated in Whole Language vs. Intensive Phonics Instruction" (Carolyn Bruce and Diane Wieland); (4) "Developing a Screening Instrument to Determine the Level of Prosocial Skill Development of First Grade Girls" (Jean Fankell, Maureen O'Sullivan, Noreen Smyth, and Kathleen Usaj); (5) "Opera Program" (Darryl Innocenzi, Helen Lauro, and Cathy Stang); (6) "The Impact of Multicultural and Non-Multicultural Educational Settings on the Attitudes of Students toward Minority Students" (Ginette Kuper-Lewis); (7) "A Descriptive Study of Interactions between Typically Developing Peers and Handicapped Children in a Special Education Preschool Setting" (Anita Melfi Visoky and Beth Dickerman Poe); (8) "The Effect of Oral vs. Written Instructional Methods on Proficiency in Spanish Classes" (Dave Nemecek); and (9) "Work in Progress" (Jeff Teeter). Information and forms relating to use of human subjects in research and brief biographies of the authors are included. (ND)

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# Action Research Monograph

***A Collection of Action Research Investigations Done in the South Euclid-Lyndhurst City School System Which Were Initiated and Completed by District Teachers and Staff Between September 1996 and September 1997***

**Funding Source: Goals 2000**
**Ohio Department of Education**

**Collaborating Institutions**
**South Euclid-Lyndhurst City School District**
**Cleveland State University**
**Ursuline College**
**John Carroll University**

**Editors:** **Donna Snodgrass, Ph.D.**
**James Salzman, Ph.D.**

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# Action Research Monograph

***A Collection of Action Research Investigations Done in the South Euclid-Lyndhurst City School System Which Were Initiated and Completed by District Teachers and Staff Between September 1996 and September 1997***

**Funding Source: Goals 2000**
**Ohio Department of Education**

**Project Director: Donna Snodgrass, Ph.D.**
**Supervisor of Instructional Evaluation**
**South Euclid-Lyndhurst City School System**
**5044 Mayfield Road**
**Lyndhurst, Ohio 44124**

**FAX (216) 691-2294**
**e-mail ESEL_DONNA@LNOCA.OHIO.GOV**

**Lawrence Marazza, Ph.D., Superintendent**

# Action Research Project Governance Team

| | |
|---|---|
| Denise Brewster | Principal<br>Lowden Elementary School |
| Mary Jo Cherry, Ph.D. | Dean of Professional Studies<br>Ursuline College |
| Darryl Innocenzi | Associate Principal<br>Greenview Upper Elementary School |
| Patricia Kearney, Ph.D. | Professor of Education<br>John Carroll University |
| Paul Kulik, Ph.D. | Former Director of Curriculum<br>South Euclid-Lyndhurst Schools,<br>Superintendent<br>Grandview Heights City Schools |
| Jim Llewellyn | Technology Coordinator<br>South Euclid-Lyndhurst Schools |
| Carl Rak, Ph.D. | Professor of Education and<br>Director of Doctoral Studies<br>Cleveland State University |
| Jim Salzman, Ph.D. | Director, Secondary Education<br>Ursuline College |
| Donna Snodgrass, Ph.D. | Action Research Project Director,<br>District Supervisor of Instructional<br>Evaluation and Student Information<br>Systems |
| Sandra Weaver | Principal<br>Greenview Upper Elementary School |
| Dale Whittington, Ph.D. | Professor, Educational Research<br>John Carroll University |
| Jane Zaharias, Ph.D. | Chairperson and Professor,<br>Specialized Programs<br>Cleveland State University |

# ACKNOWLEDGMENTS

We are grateful for the continued support of Superintendent, Dr. Lawrence Marazza, for this and other research projects across the district.

The Ohio Department of Education provided the funding for this project through a Goal's 2000 grant. Particular thanks goes to Nancy Eberhart and Marilyn Troyer of the Professional Development Department.

This project could not have been completed without the talent and dedication of the project's administrative assistant, Jane Jasper. Jane spent countless hours entering and managing data, typing, formatting, and compiling this monograph.

Dr. James Salzman of Ursuline College collaborated on this project from the day the Goals 2000 Grant was written through the editing phase of this monograph. Sharing his ideas and insights, he provided support to our fledgling researchers, as he did to me.

Thanks to Lauren Thibodeau, Doctoral Student hired with Goals 2000 money. Lauren provided support to teachers, helped with data entry, helped organize the research, video taped projects, did literature searches, and instructed teachers on how to do literature searches.

Dr. Michael Loovis of Cleveland State University attended almost all of our ten practicum sessions, helping teachers to design their studies. Of particular value was his knowledge of specific content areas like early child development and adaptive physical education. Being an experienced researcher, he was able to help teachers to translate vague ideas into well defined research questions.

Dr. Jane Zaharias, Chairperson of Cleveland State University's Department of Specialized Instructional Programs, supported this project, as she has supported numerous other projects in our district. She worked with the district to develop a course description for the one year five hour graduate Action Research Practicum which formed the foundation of this project.

Donna Snodgrass, Ph.D.

## Comments from a Higher Education Collaborator

Nearly one year ago, I first found myself in a room with over 20 prospective researchers from the South Euclid-Lyndhurst district. These were teachers by day and, there in the late afternoon of that September day, they were preparing to embark on a year-long journey, the products of which have been compiled in this monograph. I felt a certain anxiety in the room; maybe from the normal unease people feel when they begin something new, maybe because of this unusual gathering of teachers and college faculty side-by-side, sitting in this most unusual of research classes. This latter phenomenon underscored the fact that this class would be different from those that all of us had taken in the past, certainly different from the "typical" graduate research class. This would be the ultimate in on-the-job training, an opportunity to learn to be a director as well as consumer of research.

Because of my own teaching schedule, I was not able to sit in on the class for the entire year. I did, however, have the opportunity to participate during several points in the process in which they were engaged. What I saw was a group of teachers who came in with a wide diversity of knowledge but little practical experience in research, who by the end of the year, became quite sophisticated in terms of the questions they could now ask and the ways in which they could converse about the issues surrounding their own and their peers' research. Research was no longer the purview of someone else, especially not those of us in higher education, who often ask questions and report on results that are insignificant to these teachers in this school district. Research was now something that it was in their power to do, not merely to consume.

I suppose what impressed me most, and also pointed out the distance that the South Euclid-Lyndhurst researchers had covered in one short year, was that the discussions that I have shared with some and have overheard from others point to the future. These teachers are looking toward their next study, toward different and new questions raised by the present inquiry. That is certainly what real researchers do. While not necessarily the polished pieces of inquiry that one might find in a professional journal, these drafts demonstrate a methodological soundness, scholarly inquiry, and often sophisticated uses of data reporting and provide each of the authors a first step into the world of scholarly publication. Most importantly, these scholars have demonstrated their own professional commitment to bettering the classrooms in which they work for the benefit of students. The knowledge and experiences that they have gained have given them new tools to use in their efforts to improve their own students' learning. What they are sharing with you in this monograph is work that began with vague questions and has concluded with greater understanding of themselves, their students' research and their studies.

James A. Salzman, Ph.D.
Director, Secondary Education
Ursuline College

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## Helping to Ensure Your District Engages in Ethical and Quality Research

All districts engaging in research should consider establishing an Institutional Review Board (IRB). The primary purpose of an IRB is to protect teachers and children from being exposed to unethical and poor quality research. Although IRB's are only required by federal law for institutions which receive federal funds, consistent adherence to federal standards not only protects teachers and children, it can reduce the chances of undesirable legal consequence as a result of poor research.

Our IRB includes five individuals. One person's role is solely to ensure the welfare of subjects involved in the study. Another person's role is to represent science, and ensure that the design of the study is well planned. A third member is an outside member, in our case, a faculty member from a local college. Our fourth member is a parent. The last member of our IRB is our Director of Pupil Services who serves as an advisor to school policies and the district's responsibilities to children and teachers.

We have included a copy of our IRB's *Application for Review of Research Involving Human Subjects*. Feel free to use all or part of it if you intend to establish an IRB. Any staff member who engages in any research in the district is required to complete all portions of this application and submit it to our IRB for review. No research can commence within our district until it is authorized by the IRB. Some low risk studies can be expedited by the IRB's coordinator, but low risk must be defined.

We thank the University of Akron and Kent State University for sharing their IRB forms with us.

If your district has any questions about establishing an IRB or the National Research Act, they can write to:

National Commission for the Protection of Human Subjects
5333 Westbard Avenue
Bethesda, MD 20016

## SOUTH EUCLID-LYNDHURST
## APPLICATION FOR REVIEW
## RESEARCH INVOLVING HUMAN SUBJECTS
(PLEASE TYPE)

Researcher's Name _____

School(s) _____

Home Address _____

City _____ State _____ Zip _____

Home Phone Number_____ Work Number_____

Desired Start Date _____

Research Type: Funded _____ Unfunded _____

Proposal Submitted for Funding: _____

_____

Funding Agency Submitted to:

_____

_____

Title of Research:

_____

_____

_____

1. Who are the members of the research team that will have direct contact with the subjects? List their school(s) and grade levels or subject areas.

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

**PLEASE BE AWARE THAT THE RESEARCHER IS RESPONSIBLE FOR INFORMING ALL MEMBERS OF THE RESEARCH TEAM OF THE RESEARCH PROCEDURES TO BE FOLLOWED.**

2. Please explain briefly, completely, and in simple language what tasks or activities the subjects in this research will be doing.

(Attach Additional Pages if Necessary)

*** Also include with this Application for Review:

Copy of Survey Questionnaire, if applicable. If not applicable, submit IRB application in the meantime.

Any other mail to be delivered to respondents (cover letter, script of verbal instructions, etc.).

3. This study targets subjects who are: (Check YES or NO below)

| | | | | |
|---|---|---|---|---|
| ____ | YES | ____ | NO | 18 years of age and over |
| ____ | YES | ____ | NO | Under 18 years of age |
| ____ | YES | ____ | NO | Anonymous (subject's identity unknown even to researcher) |
| ____ | YES | ____ | NO | Coded for identification (subject's identity known only to researcher) |
| ____ | YES | ____ | NO | Mentally disabled |
| ____ | YES | ____ | NO | Physically handicapped |
| ____ | YES | ____ | NO | Economically/educationally disadvantaged |

4. Does this research involve the cooperation, participation, or approval of any agency, school, institution, or organization other than South Euclid-Lyndhurst?

____ YES ____ NO

A. If so, please list them and state the extent of their involvement.

(Attach Additional Pages if Necessary)

B. Has cooperation, participation, or approval already been sought or obtained from this entity? (Check YES or NO below)

_____ YES _____ NO Sought

_____ YES _____ NO Obtained (If obtained, attach a copy of written approval)

5. How do you assure that the participation of the subject is voluntary? Will subjects be asked to participate?

_____ YES _____ NO

_____

_____

If so, in what manner? What provisions will be made for subjects not willing to participate?

_____

_____

6. From where (what population) will the researcher obtain his/her volunteers?

_____

_____

7. How are subjects selected for participation?

_____

_____

8. This research: (Check YES or NO below)

_____ YES _____ NO Involves normal educational practices, such as research on regular and special education instructional strategies, or research on the effectiveness of, or the comparison among instructional techniques, curricula, or classroom management methods, and takes place in an educational setting.

_____ YES _____ NO Does this research involve the use of educational tests? (Check YES or NO below)

| | | | | |
|---|---|---|---|---|
| Cognitive | _____ | YES | _____ | NO |
| Diagnostic | _____ | YES | _____ | NO |
| Aptitude | _____ | YES | _____ | NO |
| Achievement | _____ | YES | _____ | NO |

_____ YES _____ NO Does this research involve survey or interview procedures? (Check YES or NO below)

| | | | | |
|---|---|---|---|---|
| Face-to-face | _____ | YES | _____ | NO |
| Telephone | _____ | YES | _____ | NO |
| Mailing | _____ | YES | _____ | NO |
| Other | _____ | YES | _____ | NO |

(Please specify if other)_____

_____

_____ YES _____ NO Does this research involve the collection/study of data? (Check YES or NO below)

| | | |
|---|---|---|
| Existing Data | _____ YES | _____ NO |
| Documents | _____ YES | _____ NO |
| Medical, legal, academic or other records | _____ YES | _____ NO |
| Other | _____ YES | _____ NO |

(Please specify if other)_____

_____

9. Can the human subject be directly identified by? (Check YES or NO below)

| | | |
|---|---|---|
| Name on response form | _____ YES | _____ NO |
| Photo | _____ YES | _____ NO |
| Television/VCR tape | _____ YES | _____ NO |
| Audiotape | _____ YES | _____ NO |
| Other | _____ YES | _____ NO |

(Please specify if other)_____

_____

10. Can the human subject be identified through? (Check YES or NO below)

| | | |
|---|---|---|
| Detailed biographical data | _____ YES | _____ NO |
| Coded research forms | _____ YES | _____ NO |
| Other | _____ YES | _____ NO |

(Please specify if other)_____

_____

11. The researcher shall make every possible attempt to maintain confidentiality of the research. If, for some potential reason, the responses, information, or observations of the subject became known to persons other than the researchers, could this information reasonably place the subject at risk of? (Check YES or NO below)

(a) Damage to his/her financial standing?

_____ YES _____ NO

(b) Damage to his/her present or future employability?

_____ YES _____ NO

(c) Criminal or civil liability?

_____ YES _____ NO

(d) Embarrassment or mental anguish?

_____ YES _____ NO

12. Could the research deal with sensitive aspects of the subject's own behavior? Such as: Check YES or NO below)

| | | | | |
|---|---|---|---|---|
| Drug Use | ____ | YES | ____ | NO |
| Alcohol | ____ | YES | ____ | NO |
| Sexual behavior | ____ | YES | ____ | NO |
| Physical manipulation of the participant | ____ | YES | ____ | NO |
| Illegal conduct | ____ | YES | ____ | NO |
| Other | ____ | YES | ____ | NO |

(Please specify if other)_____

_____

13. Does this research involve? (Check YES or NO below)

| | | | | |
|---|---|---|---|---|
| Coercion | ____ | YES | ____ | NO |
| Deception | ____ | YES | ____ | NO |
| Psychological manipulation of the participant | ____ | YES | ____ | NO |
| Other | ____ | YES | ____ | NO |

(Please specify if other)_____

_____

14. Are any of the techniques below involved in the research? (Check YES or NO below)

| | | | | |
|---|---|---|---|---|
| Strenuous exercise | ____ | YES | ____ | NO |
| Other physical testing | ____ | YES | ____ | NO |

(Please specify if other)_____

_____

15. Is parental consent for minors or impaired individuals requested?

____ YES ____ NO

If so, is the consent tacit or overt?

____ TACIT ____ OVERT

Please include letter to parents and copy of consent form (if applicable) with this application.

*** INCLUDE WITH THIS APPLICATION ***

1. Copy of the survey questionnaire, if applicable.
   (If not yet available, submit IRB application in the meantime).
2. Any other material intended to be delivered to respondent in conjunction with the research, including the cover letter and parental informed consent statement (also include a script of the information which will be given to the subject verbally).
3. Copies of any teacher-made test to be employed to gather information on subject.

I certify that the above information is an accurate and complete statement of the nature of my research.

Signature of Researcher_____
Date

Signature of Department Principal/Director_____
Date

Forward these materials to Donna Snodgrass - South Euclid-Lyndhurst Human Subjects Review Board, 5044 Mayfield Road, Lyndhurst, OH 44124. Telephone: (216) 691-2063

**ADDITIONAL COMMENTS MAY BE LISTED BELOW**

# The Authors

## *Marcia G. Anselmo*

Marcia Anselmo has worked as an Elementary Educator for twenty years.

She has a Bachelor of Arts degree from Ursuline College and has obtained a Masters in Education in Learning Disabilities from Notre Dame College.

In addition, she has done other action research on her own and in collaboration with Rainbow Babies and Children's Hospital.

Marcia has interests in Early Intervention and has been a conference presenter.

She is a former member of the Northern Ohio Branch of the Orton Dyslexia Society.

## *Karen Border*

Karen Border is a Fifth and Sixth Grade Teacher with twenty-seven years of experience.

Karen's undergraduate degree from Kent State University is in Early Childhood - Elementary. Her graduate degree from Cleveland State University is in Curriculum and Instruction.

Karen is a Martha Holden Jennings Scholar. She received an Honorable Mention for the Ashland Oil Award.

## *Carolyn Bruce*

Carolyn Bruce is a Reading Resource Teacher/Title I Reading Teacher. She has devoted twenty-five years to education.

Carolyn obtained an undergraduate degree in Elementary Education in 1969 and received her Master's degree in Education in 1977.

She serves on the Remedial Reading Committee of the Ohio Council of I.R.A. and was presented the Mary C. Austin Celebrate Literacy Award. She was a past president of the Mary C. Austin Reading Council.

At the present time, Carolyn teaches the Literacy and Assessment course for the John Carroll Intern Program.

## *Jean Fankell*

Jean Fankell, School Psychologist, has twelve years of experience in education. Her educational background includes a B.A. in Psychology from Kent State University, and M.A. in Clinical and School Psychology from Cleveland State University.

Jean is a member of the National Association of School Psychologists, District Coordinator of Conflict Resolution Training, and Certified Instructor and Trainer of the Non-Violent Crisis Intervention program through the Crisis Prevention Institute.

She is a Certified Cognitive Behavior Therapist by the Cleveland Center for Cognitive Behavior Therapy, member of the District Curriculum Advisory Committee, and Consultant to the MRDD Lake County Board.

## *Darryl A. Innocenzi*

Darryl A. Innocenzi, is an Associate Principal with twenty-three years in education.

Darryl's degree in English is from John Carroll University, his M.Ed. in Curriculum and Instruction is from Cleveland State University. Darryl received certification in Guidance and

Counseling from John Carroll University and certification in Administration from John Carroll University.

### *Patricia Kulp*

Patricia Kulp, a Kindergarten Teacher, has sixteen years of educational experience.

She received a B.S. in Education from Baldwin-Wallace College and Master's equivalence through John Carroll University and Baldwin-Wallace College.

Patricia is a member of the Mary C. Austin Reading Council and a member of the National Council of Teachers of Mathematics. She is a Jennings Scholar and has worked on Action Research during 1996 and 1997.

### *Ginette Kuper-Lewis*

Ginette Kuper-Lewis is a First and Second Grade Teacher with seven years of experience in education.

Ginette has a B.S. in Education from Cleveland State University and Masters in Education from Cleveland State University with concentration on Curriculum and Instruction and concentration on Reading.

Ginette has a specific educational interest in multicultural literature. Other interests include reading and travel.

### *Helen Lauro*

Helen Lauro is a Fifth Grade Teacher with thirteen years of experience in education.

Helen graduated with a B.A. Magna cum laude from Ursuline College. Her Master's degree is from John Carroll University.

Helen is a Martha Holden Jennings' Grant Recipient and a John Carroll University Cooperating Teacher.

Her interests include fishing, master gardening, and needlepoint.

### *Dave Nemecek*

Dave Nemecek, Teacher, has spent ten years in education.

Dave received undergraduate degrees in Spanish and Economics at the University of Dallas. He obtained a graduate degree in Education from John Carroll University.

His other areas of expertise and interests include: AP Scoring, travel with student groups, development of Internet activities for the classroom, research on Spain (especially XVI Century), research on Aztec and Maya cultures, research on societal effects of religious development/religions, and pedagogical research on writing and speaking in a foreign language.

### *Maureen Bridgit O'Sullivan*

Maureen Bridgit O'Sullivan is a Certified School Social Worker with fifteen years of experience in education.

Maureen received a B.A.-Social Service Major from Cleveland State University. She has a Master's degree in Counseling and Human Services from John Carroll University.

She is a Trainer of Trainers in Conflict Management. She has received In-Service Training in Child Abuse, as well as Team Building Training. Maureen is a Private Practitioner in Psychotherapy.

### *Beth Dickerman Poe*

Beth Dickerman Poe, Certified School Psychologist, MA, has been in education seven years.

Beth graduated from Miami University with a B.A. in Psychology.

She has a Master's degree in Clinical Psychology from Cleveland State University with certification in School Psychology.

Her interests are in the areas of early intervention and special needs children.

### *Noreen Smyth*

Noreen Smyth, who has five years of experience in education, is a School Psychologist.

Her Bachelor of Arts degree from Ohio University is in Social Work and Psychology. She has a Masters of Education - School Psychology degree from John Carroll University.

### *Cathy Stang*

Cathy Stang is a Sixth Grade Teacher who has spent nine years in education.

Cathy received a B.B.A. from Cleveland State University. She was in the John Carroll University Internship Program 1988-1989 and received her M.Ed. from John Carroll University.

### *Mark Tanski*

Mark Tanski is a Fifth and Sixth Grade Teacher. He has spent seven years in education.

Mark has a B.S. in Education from Cleveland State University and a M.Ed. Reading Specialization from Kent State University.

### *Jeffrey P. Teeter*

Jeffrey P. Teeter is a Science Teacher at Charles F. Brush High School. He has spent seven years in education.

Jeffrey has a B.S. in Biochemistry from Case Western Reserve University. He has a M.Ed. from John Carroll University and a M.S. in Biomedical Engineering from Case Western Reserve University.

### *Kathleen A. Usaj*

Kathleen A. Usaj, MSSA, LISW, is an Ohio Certified School Social Worker with experience working in university, agency, and school settings.

She received a Bachelor of Arts degree from Hiram College and a Master of Science degree in Social Administration from Case Western Reserve University.

She co-chairs the NASW Ohio Chapter School Social Work Steering Committee.

Special interests are in group and family work with students diagnosed with PDD, ADHD, and learning disabilities.

### *Anita Melfi Visoky*

Anita Melfi Visoky, MACCC-SLP, is a Speech-Language Pathologist, whose background in education comprises twenty-one years.

Anita's B.A. is from Cleveland State University. She also possesses a M.A. in Speech Pathology from Cleveland State University.

Her interests include early childhood speech and language skills and working with families of special education preschool children.

## *Diane Wieland*

Diane Wieland has been in education three years. She is a Grade 1/2 (looping classroom) Teacher.

Diane has a B.A. in Communication from Cleveland State University. Diane received a Post-Baccalaureate Certification in K-8 from John Carroll University. She is currently in a graduate program at John Carroll University.

Diane has a strong interest in establishing and facilitating inclusive classrooms.

# Phonemic Awareness/Multisensory Instruction:

# An Intervention for Kindergarten Children

# At Risk in Pre-reading

Marcia G. Anselmo

Patricia M. Kulp

Abstract

A significant number of kindergarten students fail to acquire basic pre-reading skills necessary for first grade. These children continue to make less progress than their peers. Without early intervention some will eventually qualify for special education services. Others will not qualify, but they will continue to struggle academically.

The purpose of this study is to ascertain whether or not a phonemic awareness/multisensory intervention in a regular classroom setting will significantly improve pre-reading skills in at-risk children by the end of kindergarten. This study examines the impact of this phonemic awareness/multisensory program on at-risk kindergartners' ability to name letters, match capital and lower case letters, and identify initial consonant sounds. Results indicate no significant differences in naming letters and matching capital and lower case letters. However, participation in the phonemic awareness/multisensory program significantly improved at-risk kindergartners' ability to identify initial consonant sounds.

## Introduction

Kindergarten children begin school with varying levels of academic readiness. By the end of kindergarten, most children master the phonemic skills necessary for first grade reading. Unfortunately, others start to fall behind their peers in this earliest of formal school experiences. Kindergarten teachers appear to be good judges of which children are at risk. In a study conducted in the South Euclid-Lyndhurst School District (Ohio) in conjunction with Rainbow Babies and Children's Hospital, investigators (Anselmo & Taylor, 1996) concluded that children judged by their kindergarten teachers to be behind their peer group in reading skills continued to remain behind at the end of second grade. Keogh (as cited in Raforth, 1988) considers early identification as the most crucial factor in eventual school success for learning disabled children. Anselmo and Taylor (1996) conclude that early identification of children who potentially may demonstrate reading difficulty can be done by a simple rating scale completed by the kindergarten teacher (Appendix A). However, identification by itself would be a futile effort unless followed by appropriate intervention. In choosing an intervention, educators need to investigate the aspects of early reading instruction.

Catts (1991) suggests that an early indicator of a reading disability is poor phonological awareness in kindergarten. Phonological awareness, phonological coding in working memory, and retrieval of phonological codes for a long-term store are cited as necessary to the acquisition of beginning reading skills (Wagner, 1993). Ball and Blachman (1988) think that preschool, kindergarten, or first grade students with the poorest segmentation skills are likely to be among the poorest readers. In their study, a

group trained in segmenting phonemes with instruction in letter names and sounds outperformed a language activities group. They assert that the teaching of phoneme segmentation skills to children before they learn to read is one of the most promising avenues for improving reading instruction and might prevent some students from meeting failure. Castle (1994) finds that small initial gains in phonemic awareness may have a snowball effect on later reading progress. In practical terms, children who are weak in phonemic awareness on entry to school will benefit from the addition of phonemic awareness instruction as part of the curriculum (Castle, 1994). A group of five-year-old children receiving phonemic awareness instruction within a whole language program outperformed a "process-writing" group on measures of phonemic awareness, pseudowords, and dictation (Castle, 1994).

In discussing guidelines for remediation of learning disabled students, Dakin (1991) states that multisensory techniques (visual, auditory, kinesthetic, and tactile) will enhance ability to attend and help with storage in long-term memory.

A number of phonemic awareness/multisensory teaching methods exist. Many of them are based on the work of Samuel Orton and Anna Gillingham. Included are the Slingerland Approach and Project Read (Ellis, 1993). The Slingerland Approach is designed to be preventative and thus reduce failure. This multisensory method uses the three modalities in a sequential structure to build from single units to more complex (Ellis, 1993).

Project Read, authored by Enfield and Greene (Greene, 1993) is designed to be an alternative to whole word, inductive instruction. Project Read is direct, multisensory, and

systematic and is designed to be taught by the classroom teacher. The developers of Project Read cite a cost of implementation of the program at 10% the cost of a pull-out program (Ellis, 1993). There are three strands to Project Read: phonology, comprehension, and written expression (Enfield, 1993). Enfield (1993) comments that curricula for reading instruction generally adopt one approach for all children. She states that school administrators generally disregard evidence which suggests intrinsic differences in the learning needs of students.

The above cited literature seems to support the concepts of early identification and intervention for children who exhibit lagging skills in a kindergarten whole language program. Studies suggest that developing phonemic awareness skills through a multisensory approach might bring about greater success for kindergarten children struggling in a whole language program while being more cost efficient. Instruction could be done in a kindergarten classroom setting provided the kindergarten teacher could work separately with the group of children receiving the multisensory, phonemic awareness approach.

The purpose of this study was to ascertain whether or not kindergarten children who are unsuccessful in naming letters, matching capital and lower case letters, and identifying initial consonant sounds would be more successful than a comparable group of kindergarten children who do not receive the intervention in these skills if given a phonemic awareness/multisensory intervention.

## Method

### Participants

Participants were 20 kindergarten children from eight half-day kindergarten classes who were rated by their teachers as making unsatisfactory progress in the kindergarten pre-reading program. Ratings were based on knowledge of letter names, matching capital and lower case letters, and initial consonant sounds. Participants were from four elementary schools in a suburban Cleveland, Ohio, school district. Group A (experimental group) was comprised of 10 students from schools 1 and 2 who were assessed by their teachers as being behind in pre-reading skills. These children received the intervention. Group B (control group) was also comprised of 10 students from schools 3 and 4 who were assessed by their teachers as being behind in pre-reading skills. These students did not receive previous intervention. Pairs were matched by Peabody Picture Vocabulary Test (PPVT-R) standard scores, age, and gender. Mean PPVT-R standard score for Group A (experimental group) = 92.6; mean PPVT-R score for Group B (control group) = 93.2. Mean age for Group A = 70.4 months and mean age for Group B = 70.3 months. Both groups consisted of five males and five females.

## Materials

### Initial Assessment (see Appendix A)

Academic Achievement was tested using teacher ratings assessing capital and lower case letter identification, matching capital and lower case letters, and initial consonant sound identification.

Ability was tested using the Peabody Picture Vocabulary Test (PPVT-R).

Posttest

Pupil Performance Objectives in reading (Lee, Border, Haimes, Gabbert, & Overfield, 1986) for kindergarten pupils in the South Euclid-Lyndhurst Schools.

Concepts included:

Recognition of capital and lower case letters dictated (n = 52)

Matching capital and corresponding lower case letters (n = 26 sets)

Matching 10 consonant sounds with 10 given pictures

(see Appendix A)

## Design and Procedure

In September, 1996, the PPVT-R was administered to all kindergarten children in the school district. In January 1997, four kindergarten teachers rated their classes to determine which students were having difficulty attaining the necessary pre-reading skills for success (see Appendix B). Any child rated as being behind in pre-reading achievement qualified for membership in either Group A or B dependent on their building assignment. Children were paired according to PPVT-R standard score, age, and sex. Children in Group A received phonemic awareness/multisensory intervention for approximately 20 minutes a session three times weekly for 10 weeks. The intervention was in place of the regular pre-reading curriculum. Children in Group B received the regular pre-reading curriculum which was whole-language based with a minimal amount of phonemic awareness/multisensory instruction. Both groups of children received the same total amount of pre-reading instruction.

The intervention program, Phonological Awareness Games in Young Children (Adams, 1996) was used with Group A. Components of the program were: listening games, rhyming, counting words in sentences, syllabification, initial sounds, phonemes, and adding letter sounds. The curriculum included, but was not limited to, using cubes to represent words, syllables, and letters. It was sequential and regressed from whole sentences to words as sentence components, to compound words, to syllables, to phonemes. Multisensory techniques included, but were not limited to, using cubes and finger tapping to represent words, syllables, letters, and phonemes. Initial sounds were emphasized, isolated, and deleted from words. Words were broken down into two, three, or four phonemes for initial or final consonant analysis.

At the end of the intervention, students in Group A as well as Group B were given the posttest (Appendix A).

## Results

### Naming Letters

Mean score for capital and lower case letter identification for Group A was .967 and mean score for Group B was .919. Statistical analysis (independent t tests) showed no significant difference between experimental and control groups ($P < .05$).

### Matching Capital and Lower Case Letters

Mean score for matching capital and lower case letters for Group A was .965 and mean score for group B was .896. Statistical analysis (independent t test results) showed no significant difference between experimental and control groups ($P < .05$).

Identifying Initial Consonant Sounds

Mean score for identifying initial consonant sounds for Group A was .940 and mean score for Group B was .680. Statistical analysis (independent t tests) indicate significance ($P < .05$).

## Discussion

The data indicate that the phonemic awareness/multisensory intervention employed did not significantly increase a child's ability to identify capital and lower case letters or their ability to match corresponding capital and lower case letters.

The phonemic awareness/multisensory intervention did have significant impact on ability to identify initial consonant sounds. Young learners who can read initial consonant sounds demonstrate a basic readiness to engage in the *reading* process. They show the prerequisite auditory discrimination skills to read, and demonstrate that they can isolate and identify sounds (phonemes) from an entire word. The degree to which we can facilitate the development of such skills is the degree to which we can orient and groom our young students for a successful reading experience. Although the number of students in the study was small, the degree of significance suggests that the intervention was successful.

The phonemic awareness program can easily be taught within a classroom setting. The lessons used are sequential, clear, and materials are readily available in a kindergarten classroom. The cost of the curriculum "Phonemic Awareness in Young Children" (Adams, 1996) is only $22.95. Other members of the kindergarten class not rated at risk in the pre-reading program appeared to have both enjoyed and profited from

whole group lessons. The curriculum was very affordable.

The two teachers who used the experimental program with the at-risk students have begun to use the program with all of the students in their classes. Informal observations suggest that students of all ability groups are benefiting from the program. The next step would be to run our study again. This time, however, we would stratify our sample into high, average, and low abilities and try to determine if the program had differential effects on these different subpopulations. We would also like to see this program introduced into other kindergarten classes, as well as continued into the first grade with students who are at the greatest risk of having reading difficulties.

# Appendix A

KINDERGARTEN
P.P.O #A-3

NAME_____

DATE_____

Given 52 sets of four letters (26 capital/26 lower case) the student will be able to circle the correct letter when named by the teacher with 47 or more items correct. (90% accuracy)

| 1 | 2 | 3 |
|---|---|---|
| D S M R | X P M O | B Y G U |
| Q T N L | K Q D A | R C F K |
| B V T A | C O R B | Z S E T |
| M R O B | F K M R | U A G M |
| T H A Q | E T P F | D M I W |
| L N S I | L Q G S | R M C X |
| O Y W N | W N E A | G U N T |
| N V R Q | L I O D | O Z A X |
| C J E T | P M S I | |

Score_____ P.P.O. Passed_____ P.P.O. Not Passed_____

KINDERGARTEN
P.P.O #A-3

NAME_____

DATE_____

Given 52 sets of four letters (26 capital/26 lower case) the student will be able to circle the correct letter when named by the teacher with 47 or more items correct. (90% accuracy)

| 1 | 2 | 3 |
|---|---|---|
| r n o b | w i m x | e k l a |
| h b m i | r k j d | o y r x |
| f g s y | b i q o | w f n s |
| e j b a | s r u b | u e a n |
| k c h g | h q w j | k m c o |
| s l k o | i a f g | w f m q |
| h n g r | m r e h | r f y t |
| y a v h | d m t i | h z q i |
| o f g j | k c p l | |

Score_____ P.P.O. Passed_____ P.P.O. Not Passed_____

KINDERGARTEN
P.P.O. #A-4

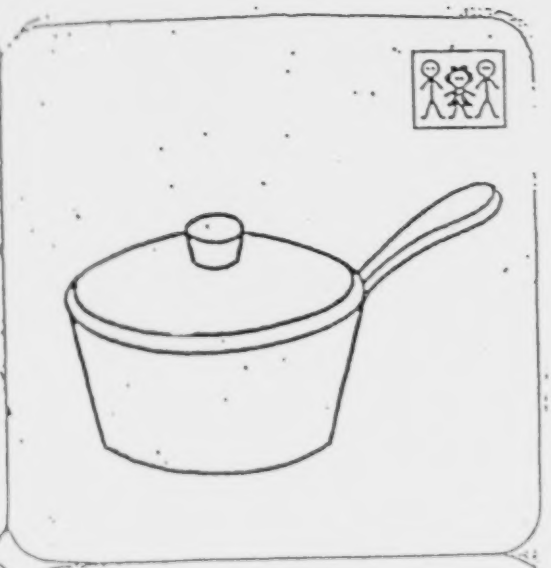
NAME_____

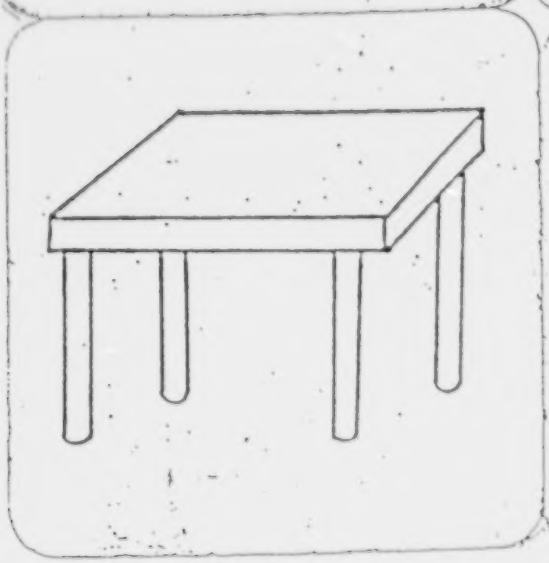
DATE_____

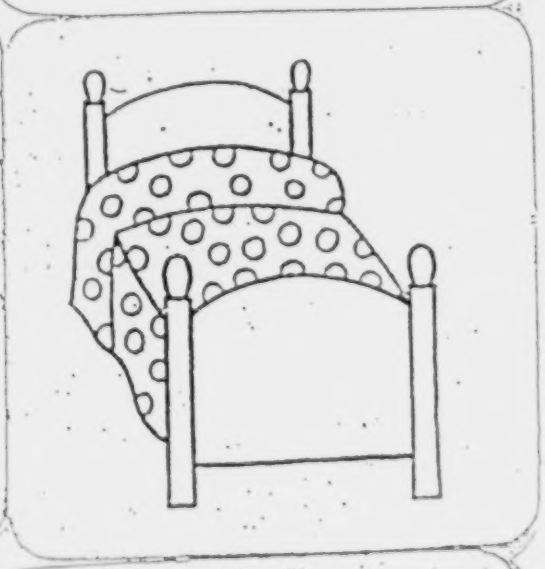
Given 26 sets of capital letters and three choices of lower case letters for each the student will circle the companion lower case letter for each capital with 21 items correct (80% accuracy)

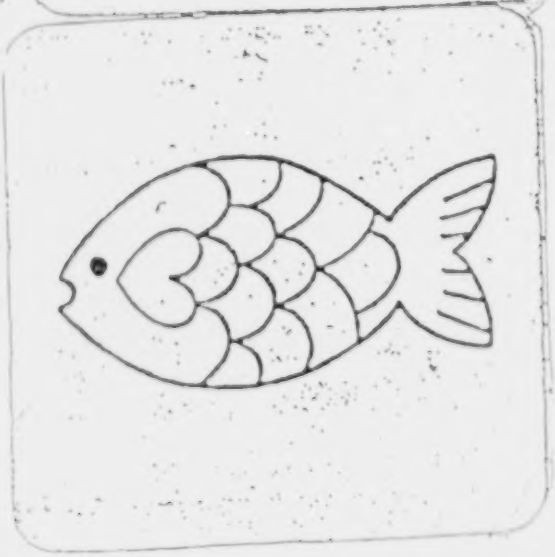
| | | | | | |
|---|---|---|---|---|---|
| B | b g d | G | g j e | H | h k n |
| N | h w v | M | m g n | X | y x v |
| P | d x p | Y | y x j | N | m g n |
| V | w h v | A | e a f | D | d x p |
| C | c m e | Q | q o h | O | q o h |
| I | n i r | U | y u n | E | s a e |
| L | p f l | J | g j e | R | n i r |
| F | f t i | S | u i s | K | n k h |
| Z | u z y | T | t k f | | |

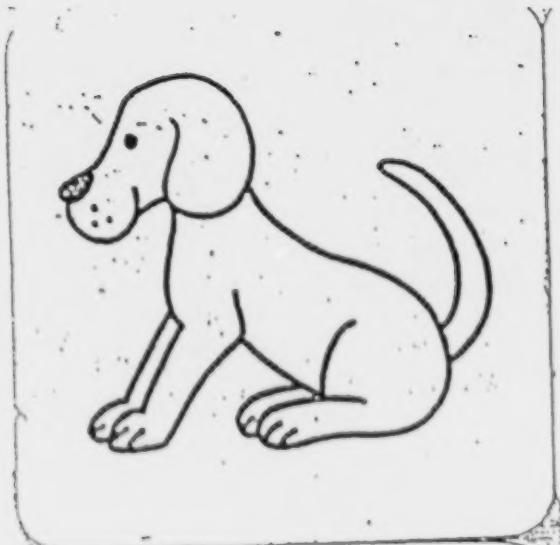
Score_____ P.P.P. Passed_____ P.P.O. Not Passed_____

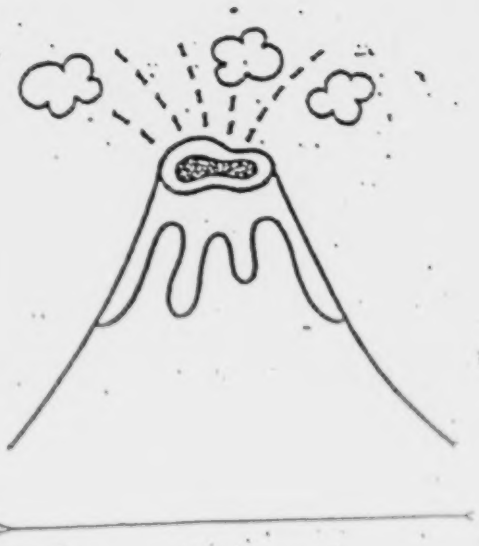


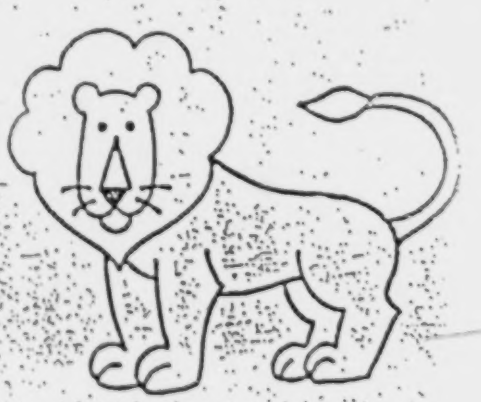


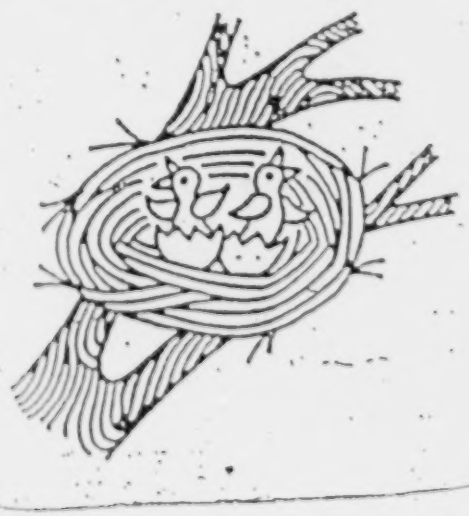












# Appendix B

| Pupil Performance Objectives<br>Date_____<br>Teacher_____<br>Grade _____Kindergarten<br>Building_____ | Student Names | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| READING/WRITING SKILLS | | | | | | | | | | | |
| Knows letter names | | | | | | | | | | | |
| Knows letter sounds | | | | | | | | | | | |
| Understands correspondence between letters/words and oral language | | | | | | | | | | | |
| | | | | | | | | | | | |

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# The Effects of Reading Aloud vs. Sustained Silent Reading on Student Comprehension

Karen Border and Mark Tanski

Elementary teachers, no matter what grade level they teach, spend countless classroom hours trying to insure that all students acquire the ability to read and the joy of reading independently for personal pleasure. The materials teachers use are as varied as the methods employed: basals, chapter books, poetry, big books, journals, clubs, contracting, reading aloud, and silent reading. In some cases children learn to love reading, but some children continue to dislike or resist reading. These children are either reluctant to read silently or just do not seem to develop the capacity to do so. If children are reluctant or poor readers, it is more productive to require them to participate in Sustained Silent Reading (SSR), or would time be better spent reading the material aloud to these students? This study explores the impact of SSR vs. teachers reading aloud to students and students' understanding of the text. In an attempt to ascertain students' attitudes toward SSR vs. teachers reading aloud, the study also asks the students to respond to how much they feel they "understand" when they are read to and how much they understand when they read silently. Students were also asked "how often" they would like to be read to and how often they would like to read by themselves.

It is not disputed that the more a student reads the better reader he or she becomes. Getting students to read is not always easy. Is it more productive to let them read silently or alone in an activity known as SSR (Sustained Silent Reading)? Or would time be better spent reading aloud to students so that they hear what good reading sounds like and have a chance to discuss with others what they are hearing read to them?

Literature Review

Many teachers and parents are concerned about children not demonstrating comprehension and motivation to read. Does it affect children if they read the book, or if it is read to them? These questions will be addressed in the pages ahead and the relationship between motivating children to read and reading to them will also be explored. In a study conducted by a group of teachers, the focus on reading motivation was linked to children's self-concept as readers (Gambrell, Palmer, Codling & Mazzoni, 1996). The image of the child was a key factor in the formation of motivational reading and interaction with books. "Highly motivated readers are self-determining and generate their own rewarding opportunities. They want to read and choose to read for a wide range of personal reasons such as curiosity, involvement, social interchange, and emotional satisfaction" (Gambrell, et al. 1996, p. 518). The premise is that teachers should take responsibility and advantage of these factors which may or may not present themselves in the classroom. Also, educators must understand that all children will read when given the right set of variables and the opportunity. Even the most unwilling of readers will take advantage of the situation and read when a "structured period of silent reading time" is in place (Vacca, Vacca & Gove, 1991).

In order to understand what students comprehend and why they are reading, understanding the conditions which motivate them to read is essential. The literature on the relationship between classroom practice and children's interest in reading is complex and varied. Gambrell (1996) noted that the motivating of children to want to read has always been a problem which raises great concern for teachers. She focuses on the

fundamental needs of all classrooms in order to establish a positive environment. Having access to books would hopefully aid in the creation of a book-rich classroom and home with parental support. Self-selection of books by the students, along with, recommendations by teachers of high interest books which are on the student's independent reading level, time for social interactions about books, and a positive model who values reading and displays this passion would help support the rise of a motivated reader. Gambrell concludes that many teachers are seen by their students as the reason for wanting to read and where their interest in literature stems. With following and monitoring of the above guidelines, many more students will become active readers.

Koskinen (1994) points out that the circumstances which also help motivate children to read are their past experiences with books and the role books play is critical to the student's drive to want to read. She goes on to say that teachers need to plan carefully when providing literacy experiences through reading alouds and Sustained Silent Reading (SSR) time.

A great deal of research places emphasis on the development of listening and comprehension skills (May, 1986; Schwartz, 1995; Segal & Segal, 1994; Sullivan, 1987; Winograd & Smith, 1987). According to Jim Trelease (1995), "If a child is old enough to talk to, the child is old enough to read to" (p. 86). Trelease's point may seem simple yet it can only be one of encouragement by teachers, librarians, media and friends that all children are read to daily. In order to build a listening comprehension of text, which usually is higher in children according to Trelease (1995), they must be read to at a higher level than their independent reading level. Dixon (1987) goes as far to say that journals

should be used with older students in connection with both silent reading and after students are read to so to promote and enhance comprehension and appreciation. Kaisen reported (1987) that many teachers would choose to read to their students even if they were not required to do so.

In the classroom, it is beneficial to provide time for students to read independently. Teachers, as pointed out by Gambrell (1996), play a vital role in the developing and fostering of students as readers of enjoyment and information. Teachers are responsible for providing the time and framework for Sustained Silent Reading (Hunt, 1996 & 1997). Hunt sees this block or period of time as one which should be committed to SSR. It is also a time for fostering discussions of the books which children read in order to provide a positive model of how readers deal with text. Hunt goes on to say that students can build a positive image of themselves as readers if teachers promote and put a positive light upon the amount of reading completed and the features of the material. Winograd and Smith (1987) argued that cultivated reading is what makes people want to keep reading. It motivates them and creates readers for a lifetime. In classrooms, it should be a goal to develop this type of reader. By having a period of time which is used each day for SSR, students may be reaping the many outlined benefits as pointed out above. Vacca, Vacca and Gove (1991) reason that classrooms which do not have a committed SSR period which encourages independent reading often advance the belief that reading is unimportant. May (1986) supports this by saying "...[that] positive attitudes *can* lead to positive achievements" (p. 415).

Many teachers spend time discussing books which their students read through the use of literature circles, reading groups, or journals. They hope to tackle the issues within the text and advance comprehension and knowledge of the new material. These skills can also be accomplished by reading to students and allowing for time to discuss what students feel is important along with the desired teacher issues. In the next session, the benefits of reading aloud to students will be examined.

According to Sullivan (1987), read aloud sessions are appropriate for any grade level and the primary purpose for this time is to stimulate discussions on critical issues. Sullivan proceeds to outline the objectives for a quality read aloud session for teachers and she supplies a visual for progression:

Examine the story's situation.

Apply it to life.

Apply it to oneself.

The triangle illustrates a downward movement of understanding which becomes broader as students and the teacher discuss the story or text. Students will share their knowledge and ideas if the discussion is open and the class has interest in the reading. When these items are present, the read aloud session is successful. The read aloud session also provides evidence to Sullivan's belief that through the "...spurring of youngsters to think more deeply about critical issues, we are providing them with the

opportunity to think and react to situations that they will undoubtedly face in their own lives" (p. 878).

When choosing a book, teachers should keep in mind that read aloud sessions should be enjoyable for everyone and adopting the practice of reading to students can be accomplished by anyone. Jim Trelease (1996) argues that children should be read to daily based on the following:

1. "...that reading aloud to children improves their reading, writing, speaking, listening, and best of all, their attitudes about reading."
2. "Children listen on a higher level than they read...That's why it's important for teachers and parents to continue reading aloud even after a child knows how to read on his or her own. And it's best to read aloud on a higher level than the child's reading ability."
3. "Reading aloud to children builds comprehension because listening comprehension almost always proceeds reading comprehension."
4. "Reading aloud is a commercial for reading. Every time we read to a child we're sending a pleasure message to the child's brain, conditioning him or her to associate books and print with pleasure."
5. "Reading is an accrued skill. The more children read, the better they get at it. By reading aloud, you're modeling this skill for them."

Trelease (1996) also points out that reading books which are enjoyed by the teacher is also important to creating a mood and setting an example that reading is a positive experience. Read aloud sessions can also be more enjoyable by keeping charts

of the class progress, reading picture books with older students. Having audio tapes of books already read, encouraging parents to read aloud to their children, and letting students make judgments about books even if you don't agree.

Other researchers (Kaisen, 1987; Koskinen, 1994; Segal & Segal, 1994) have also maintained that reading aloud to children increases attention span, provides a positive experience for students who become frustrated with more difficult books, and that many students make their independent book selections based on what was read to them by their teacher.

Researchers (Gambrell, 1996) have found that read aloud and SSR time both prove to be necessary ingredients into the development of readers. Students should have time in school to read silently and be read to. They should also be encouraged to share their views on book related issues and to share books with others. These actions should be modeled by the teacher and they should inform parents of the varieties of reading techniques and genres so that the excitement about books and the child's exposure to print can be expanded beyond the classroom. Through the integration of these types of literacy experiences, when research is considered, children should become more passionate about reading and their comprehension will improve.

## Design

### Subjects

This study was conducted in an upper elementary building which contains students from grades five and six. Approximately 700 students funnel into this building from across the district's six primary elementary schools. The upper elementary building

is split into teams, named by colors. Most teams consist of three teachers and one teacher-intern who works with the team for one year. The students come together for the first time in fifth grade, and many do not know each other. This year, there are approximately 375 fifth grade students.

The two classrooms involved in the research are made up of a total of forty-four heterogeneously grouped fifth graders. Many, but not all of the students are considered to be at-risk. On the average, children from Class 1 have somewhat weaker skills and are more at-risk to be poor readers than students in Class 2. It was indicated by either their parents or teachers that these students experienced some difficulty with school in the past. Students in both classrooms range in ages from ten to twelve years of age. Sixteen of the students are girls and twenty-eight are boys. Ten of the students are African-American and the remainder are Caucasian. There are two teachers in this two-year looping program and one teacher-intern.

The students in the program come from a variety of socioeconomic, ethnic and racial backgrounds. Although some of the students did receive special services in the past, none presently qualify for or receive special services such as Chapter One tutoring and they do not have an Individual Educational Plan (I.E.P.). However, at least seven students have been diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) and have been prescribed Ritalin by their family physician.

**Setting**

The classrooms involved in the study have the largest square footage in the school. They individually measure approximately sixty feet along each wall and are

basically rectangular in shape. They contain a large folding wall, comprised of blackboard and bulletin board space, which divides the two rooms into separate working areas. The wall can be opened to form one very large work area. During the study, the wall remained closed because of the working situation. The basic arrangement of the two classrooms is in a square-like pattern with a number of different working areas. The student seating area has either rows of five desks across and five deep, or it is arranged in a cooperative group setting of three to four desks per group. We changed the desks often to foster a friendly, cohesive environment, but during the study, the classroom remained in a cooperative learning, or group format. The rooms offer a total of seven computers for student and teacher use, book shelves filled with a variety of literature, spacious carpet areas made up of two large couches, bean bags, and pillows. There are also four to five large tables in each room where students can work in groups or spread out individual projects. The remainder of sections of the rooms are filled with patches of floor space where students can also work on their own or meet with group members. The perimeters of the rooms contain motivational and educational posters hanging from the ceiling and walls. Teacher 1's classroom contains an extra back room which measures six by twelve feet in area and is used for storage, small group work, intervention and enrichment activities. The rooms also have a connecting storage room which holds teacher and student materials. It measures approximately six by ten feet. Just outside the classrooms are student lockers. The rooms are located on the bottom floor of a three floor building. Other rooms on this floor are used for instrumental and vocal music and physical education.

**Methodology**

This study attempted to determine if there was a significant difference in students' understanding of the text if reading materials were presented using two different reading instruction techniques: teachers reading aloud vs. SSR. The study also questioned the students to determine their attitude towards these two types of reading instruction. A counterbalanced design was employed. During phase I of the study, teacher 1 used the read aloud technique with her class while teacher 2 employed the SSR technique with his class. During phase II, teacher 1 used the SSR technique, while teacher 2 employed the read aloud technique.

The time slot for this study was immediately after lunch. Twenty minutes of the time were spent engaged in SSR and then followed by a reflection period of 20 minutes related to writing or oral sharing in groups. The read alouds were also done after lunch.

To begin the study, the students took an informal survey to determine which books they had read or had been read to them. Six possible titles of young adult literature were selected. Each had an independent reading level of fourth grade. The two books chosen were of similar themes and length that the children were not previously familiar with. Chosen were Welcome Home Jellybean by Marlene Fanta Shyer and The Summer of the Swans by Betsy Byars. Both of these books dealt with a family who had a mentally retarded sibling.

It was important to have the children read books that were as similar as possible so that their comprehension and attitude toward the books and engagement of reading could be measured reliably. To begin the study, teacher 2's class read the book

Welcome Home Jellybean silently during SSR time while teacher 1's class had the same book read aloud to them. Once this phase was completed, the activities were switched so that teacher 2 now read The Summer of the Swans aloud to his class while the students in teacher 1's class read it silently during SSR time. It should be noted that after each twenty minute SSR or read aloud session, children were supplied time to write in their journal on any topic which they desired. Some wrote about the book and others wrote about a variety of topics. Each phase lasted three weeks. After six weeks, both groups had been exposed to both methods.

Once the children were finished with the independent SSR book, they completed a quiz to measure their attitude and comprehension.

In a similar fashion, when the teacher finished reading the selected book aloud, the students proceeded to take a comparable survey and quiz which coincided with the book. The quiz contained six sections to measure the students' comprehension: character match, true-false, vocabulary, multiple choice, sequencing and essays. For the purpose of this study, the results of the sequencing and essays sections were not used. Both tests were created to be similar in composition and measurement.

Student results on the quizzes were analyzed to determine the answers to the following questions:

1. Is there a significant difference in student performance between students experiencing SSR vs. read aloud instructional technique?
2. Is there a significant difference in student attitudes between students experiencing SSR vs. read aloud instructional technique?

## Results

A paired t-test compared the comprehension of the students from both classes as a whole when they were tested on the reading material after reading the material silently (SSR) and tested on material after being read to by the teacher aloud. The combined mean student performance from both classes after the SSR condition was 12.2778 (SD = 4.340) and the combined mean of student performance after the read aloud activity was 15.4167 (SD = 4.292). The difference between these two means was significant, $p < .000$ (see Table 1). However, disaggregated data analysis suggested that the children in class 2 (the class, which on the average, was more academically able) had no significant difference in their performance when exposed to SSR (mean = 14.1333; SD = 3.796) versus read aloud (14.1333; SD = 4.0333) techniques (see Table 2). However, the children in class 1 (the class, which on the average, was less academically able) showed a remarkably large and significant difference in their mean performance when exposed to SSR (10.9524; SD = 4.295) versus read aloud (16.3333; SD = 4.328) techniques (see Table 3).

The students in both classes were asked to respond to how much they felt they *understood when read to* and how much they felt they *understood when they read silently*. Their choices were, *I understand*: a) *almost everything I read,* b) *some of what I read,* c) *almost none of what I read,* and d) *none of what I read.* There was no significant difference in how the children from both classes felt ($P < .05$). Both classes felt they understood "some" of what they read or listened to.

Students in both classes were asked to respond to *how often they would like to read silently* and *how often they would like to read aloud*. Their choices were: a) *every day*, b) *almost every day*, c) *once a week*, and d) *never*. The more able group of students responded that they would like to participate in silent reading more often than did the weaker group ($P < .05$). The more able group's average choice was midway between *every day*, and *almost every day*. The less able group was, on the average, midway between *almost every day*, and *once a week*. There was no significant difference in either group's attitude toward the frequency with which they wanted to participate in read aloud sessions; both groups chose *almost every day*.

## Discussion

As it appears, there is a significant difference in the performance of less able at-risk students exposed to SSR and read aloud techniques. The magnitude of this difference is so pronounced that it initially made it look as if there was a significant difference with both groups (see Table 1). Separate data analysis of each class suggests that the difference is really only with the more at-risk group and not with both groups (see Tables 2 and 3).

Students' responses to the questionnaires suggest that the more able group wanted to participate in silent reading more often than the less able class, suggesting more comfort with silent reading. Both groups expressed a desire to be read to "almost every day". This suggests both groups enjoyed this activity.

## TABLE 1

A Comparison of Correct Test Responses of Students Taught Using Read Aloud and SSR Instructional Techniques

| Variable | Number of pairs | Corr | 2-tail sig | Mean | SD | SE of Mean |
|---|---|---|---|---|---|---|
| Read Aloud | 36 | .399 | .016 | 15.4167 | 4.292 | .715 |
| SSR | | | | 12.2778 | 4.34 | .723 |

| Paired Differences | | | | | |
|---|---|---|---|---|---|
| Mean | SD | SE of Mean | t-value | df | 2-tail Sig |
| 3.1389 | 4.734 | .789 | 3.98 | 35 | .000 |

**95% CI (1.537, 4.741)**

## TABLE 2

A Comparison of Correct Test Responses of Class 2 Students Taught Using Read Aloud and SSR Instructional Techniques

| Variable | Number of pairs | Corr | 2-tail sig | Mean | SD | SE of Mean |
|---|---|---|---|---|---|---|
| Read Aloud | 15 | .610 | .016 | 14.1333 | 4.033 | 1.041 |
| SSR | | | | 14.1333 | 3.796 | .980 |

| Paired Differences | | | | | |
|---|---|---|---|---|---|
| Mean | SD | SE of Mean | t-value | df | 2-tail Sig |
| .0000 | 3.464 | .894 | .00 | 14 | 1.000 |

**95% CI (-1.918, 1.918)**

**TABLE 3**

A Comparison of Correct Test Responses of Class 1 Students Taught Using Read Aloud and SSR Instructional Techniques

| Variable | Number of pairs | Corr | 2-tail sig | Mean | SD | SE of Mean |
|---|---|---|---|---|---|---|
| Read Aloud | 21 | .512 | .018 | 16.1333 | 4.328 | .944 |
| SSR | | | | 10.9524 | 4.295 | .937 |

| Paired Differences | | | | | |
|---|---|---|---|---|---|
| Mean | SD | SE of Mean | t-value | df | 2-tail Sig |
| 5.3810 | 4.260 | .930 | 5.79 | 20 | .000 |

**95% CI (3.442, 7.320)**

There was, however, no difference in how well either group felt they comprehended the material. Both groups felt they comprehended "some" of the material. This lack of difference could be real, or given the vagueness and subjectiveness of the term "some", the lack of difference could be an artifact of the choices provided on the survey.

The results of this study may give valuable information to classroom teachers. The study concluded that at-risk students' comprehension can be affected by the type of reading activity students engage in. While it is important to expose students who are weak readers to many types of reading activities, if comprehension is the prime objective, then employing read aloud techniques might be a teacher's best instruction choice. At least, they may want to supplement SSR reading with tapes of the materials read aloud.

Many times during the school day, reading is not a subject of the curriculum but rather the tool employed for the express purpose of taking in information. In these cases,

students are reading to learn rather than learning to read. This is often evident in areas of the curriculum such as Science and Social Studies. In such activities, comprehension is the focus of the lesson rather than the skills of reading. Gearing the teaching strategy to the students' reading preference can insure greater understanding and retention of the material read. As with any area of the curriculum, exposing students to a variety of strategies is important. However, knowing students' best mode of learning is a valuable tool when working with students who have a reading level below that of the text they are required to read. In order to support our conclusions, this study should be replicated. One problem with the study was that the two different classes read opposite books during opposing treatments. Obviously, one cannot learn material from the same book under multiple treatments. However, if replicated, students might be asked to read multiple books under read aloud and SSR conditions with data collected after each reading. If a consistent pattern emerged; namely that at-risk children learned more in read aloud context, our results would have further support.

In conclusion, this study suggests that with this particular at-risk student population, the choice of teaching strategies significantly influenced the level of comprehension.

# An Investigation into the Reading and Writing Attitudes of Second Graders who have Participated in Whole Language vs. Intensive Phonics Instruction

Carolyn Bruce

Diane Wieland

The study of the impact of various instructional strategies and methodologies on students' reading and writing achievement are quantifiably more available than the impact of various instructional strategies and methodologies on students' reading and writing attitudes. However, several researchers have made assessments regarding reading attitudes.

A study (Swanson, 1985) conducted in eastern North Carolina explored the responses of kindergarten, third and sixth graders in four categories: a) the definition of reading, b) the purpose of reading, c) the process of reading, and d) the teacher's instructional intent. The students in this study were in a phonic-emphasis reading program. In this study, almost all of the students believed that reading was an act to be performed in school. Additionally, the third and sixth grade students defined reading as recognizing words or learning words. Forty-three percent of the sixth graders viewed reading as improving skills. The process of reading elicited responses indicating that reading means reading every word and remembering every word to derive meaning or obtaining the right answer, the only answer, to questions in a workbook. Students also viewed reading as a never-ending process of word lists, skill sheets, or workbooks.

The impact of the reading program on student's perceptions cannot be discounted. The methodology and amount of instruction and emphasis on various facets of the program will influence or formulate perceptions toward the learning to read process.

The results of another study (Morrow, 1986) indicate that while reading attitudes of second graders improved as a recreational reading program and a library center were introduced into the classroom, there was no correlation between the use of literature and

the children's level of reading achievement. Implications of this study are that, although reading attitudes are favorable toward literacy behaviors, low-achieving students do not demonstrate an increase in reading scores. Teachers emphasizing skill development may not foster voluntary reading. Thus, while students in skill development programs may be better able to read, they may not choose to read.

A comparative study conducted by Joslin (1985) with kindergarten students may have implications for teaching direct phonic instruction. Results of this study indicate that students in a modified whole language classroom receiving 20 minutes of direct phonic instruction scored better on four assessments. Using Morris's Early Reading Screening Instrument, the students were assessed on Alphabet Knowledge, Phonological Awareness, Word Recognition in Context and Word Recognition in Isolation. Although this study indicates that students receiving the isolated phonic instruction scored higher than the kindergarten students not receiving 20 minutes of direct phonic instruction, Stanovich (1986) asserts that teachers rely heavily on teaching isolated phonic skills to struggling readers. This type of approach focuses on the students' weakness and lessens motivation. Children who are weak decoders may view reading as a set of skills to be learned. This may possibly contribute to their poor attitude toward recreational reading.

Stanovich (1986) delineates varying causes of weak reading skills. Positive learning outcomes stem from the early development of decoding skills. Acquisition of these skills provides opportunities for visual/orthographic codes to become established in memory for future access. Word recognition is easier with the ability to decode. With word recognition comes the acquisition of vocabulary knowledge which leads to

comprehension. The "Matthew effect" proposed by Stanovich, reflects that "the rich get richer" while the "poor get poorer". The children who are reading who have developed vocabularies will read more, learn more words, and hence, learn more. Large individual differences in educational achievement can be traced to those students who have developed decoding skills. Children who become better readers choose friends who read, choose to read for leisure, and enjoy buying and receiving books which precipitates feelings of enjoyment and self-satisfaction. Better readers then have exposure to more written language than poorer readers. Attitudes toward reading and writing will be more positive among those who find reading pleasurable.

Obviously, the relationship between phonemic training, literature-based instruction, and enjoyment of reading is complex. Children who enjoy reading tend to have better phonetic skills. But, the question of whether poor readers with weak phonetic skills will experience improved attitudes toward reading as a result of phonemic instruction is not clear.

Instructional practices in the South Euclid-Lyndhurst School District in the area of reading have primarily focused on wholistic methods to teach reading. However, practices in several elementary schools have emphasized the teaching of Systemmatic Intensive Phonics (SIP) rather than whole language methods. The Systemmatic Phonics program is highly structured with continued phonemic drills and the learning of phonic rules. The whole class instruction directs students to replicate visual and sound-symbol relationships on a chalkboard. During the 30-45 minute period, the teacher checks students' work and provides immediate feedback.

Whole language learning theory links the learning of reading and writing with that of oral language. The conditions which make learning to talk successful (immersion, demonstration, engagement, expectation, responsibility and approximation) are employed to develop reading and writing skills. Language is a network of interlocking systems with the core being meaning centered. Grammar, phonemic systems and context flow outwardly from the core. Much attention has been given to the notion that SIP may produce students who are word callers identifiable by students being able to say words but not gaining meaning from the text. In addition, students trained by SIP methods may not choose to read or write. The issue this study focuses on is the differing effects on the reading and writing attitudes of second grade children in SIP and Whole Language classrooms. Obviously, attitudes toward reading and writing affect the amount of time children spend outside the classroom reading and writing.

Students' self-concept with regard to how they view themselves as readers and writers is a key element toward sustaining attitudes that lead to becoming lifelong readers and writers (Rosenblatt, 1938). Students need approaches in early literacy stages that lead to making approximations in both reading and writing. Teachers who employ wholistic instruction, encouraging students to "give it a go" help students to learn independence in the reading and writing process. Students are guided by teachers to read for meaning first by reinforcing "what makes sense" in the context of the story element. This is not to say that phonemic awareness and instruction is neglected in wholistic instruction. Rather, it is embedded within the context and content of the text. This

debate as to the impact of whole language versus SIP is not unique to our district but is mirrored across the nation.

In this study, we investigate the relationship between the type of language arts instruction students receive, SIP and Whole Language, and the relationship it has on student attitudes toward reading and writing; that is, are the reading and writing attitudes of second grade children significantly different based on whether they receive whole language versus SIP in language arts instruction?

## Method

### Participants

Fifty-six second grade students from two elementary schools in the South Euclid-Lyndhurst Schools participated in the study. The study compared the reading and writing attitudes of second graders who receive instruction in Systemmatic Intensive Phonics (SIP) with second graders who receive phonemic instruction in a whole language context through patterned spelling lessons and embedded lessons emphasizing word families.

The schools were selected in such a way that they provided a cross-section of second graders in terms of socioeconomic status, ethnic diversity, and aptitude for verbal learning as predetermined by the 1995 Kindergarten screening results based on the Peabody Picture Vocabulary Test (PPVT). Of the 56 students, 32 were boys and 24 were girls. Students in each treatment group were matched using the Peabody Picture Vocabulary Test (PPVT) to determine aptitude for verbal learning and subsequently stratified into one of three categories: high, middle, and low aptitudes. Those placed in the high category had PPVT scores of 115 and higher. Those placed in the middle

category had scores of 95 through 114 and those placed in the low category had PPVT scores of 94 and lower. There were 4 high students, 26 in the middle, and 26 in the low category.

Each treatment group was exposed to the same reading and writing routines expected in Whole Language classrooms. However, the SIP group sustained daily lessons of one-half hour to 45 minutes of intensive systematic phonic lessons introducing isolated phonics skills. Students wrote words and sounds at the chalkboard while the teacher directed the phonics lesson. Thus, the difference between the groups was that the whole language group children were not exposed to daily intensive systematic phonics drills. The district requires whole language instruction. Therefore, any SIP training must occur above and beyond the regular whole language program. SIP students are obviously spending more time reading. If this study were investigating reading and writing achievement, the fact that the SIP students received more instruction might seriously confound the results. However, the study is investigating attitude toward reading and writing. It is, therefore, the authors' opinion that the extra SIP training will not excessively confound the results of the study.

Instruments

Two attitudinal surveys were administered. One measured attitudes toward reading. One measured attitudes toward writing. Children were asked to respond to 20 questions on the Garfield Reading Attitude (The Reading Teacher, 1990). Reliability coefficient (Cronbach's alpha) was .88 for the Garfield Reading Attitude's Inventory.

A ten-item writing attitude survey, an adaptation of the Garfield Reading Attitude developed by Bruce and Wieland, has a Cronbach alpha of .9108. The original ten items were reduced to nine items after an analysis of the Cronbach's Alpha revealed that one item was not contributing to the coefficient alpha. By deleting that item, the coefficient alpha jumped from .8706 to .9108.

The reliability of the writing test was established using pilot second grade students from a non-participating school within the district. The class was comprised of 17 students whose exposure to the two instructional methods varied during first and second grade. The researchers administered the Attitudes Survey to the test group in February 1997.

The Attitudes Survey was comprised of three sections: a practice survey, the reading attitude survey, and the writing attitude survey. The practice survey was constructed to allow the students time to practice using the document by circling the Garfield likeness which best represented their attitude toward a variety of every day activities. The four Garfield drawings on each survey question are ordered from ecstatic, happy, sad, to angry. For purposes of data analysis, the ecstatic Garfield was valued at 4, the happy Garfield was valued at 3, the sad Garfield was valued at 2, and the angry Garfield was valued at 1.

The administration of the survey to the pilot group was conducted by the researchers in the course of a school day at times pre-arranged with the participants' classroom teacher. Students remained in the classroom for the 30 minutes period. The researchers reviewed the components and content of the survey with the students prior to

beginning. Students were told that the information on their surveys would be seen only by the researchers and were encouraged to respond honestly.

Following the administration of the pilot writing survey, several changes were made. Pilot students suggested each section of the document (practice, reading and writing) be color-coded for ease of identification. They also suggested that directions be given that allow for questions during the administration of the survey. The students were an excellent source of useful feedback about the clarity of the survey.

## Procedure

Changes to the pilot version of the writing survey were incorporated into the final version of the writing survey. During a two-week period in March 1997, the final version of the writing survey and the original reading survey were administered to the 56 second grade students in the two participating schools. The two investigators administered both surveys to all 56 study participants. A second phase was added to the study at this point as some individual student responses on the survey were surprising and incongruent with those students' classroom behavior. The primary investigators decided that interviews with selected students might give them additional insight into how children perceive and feel about writing and reading. Children were interviewed if they rated themselves as totally happy (ratings of 4) with all aspects of writing and reading on the surveys, or if they had high PPVT scores (high aptitudes for verbal learning) but had an average mean response on the surveys of 2.5 or less, or if they had low PPVT scores (low aptitudes for verbal learning) but rated themselves as high (3.5 or above on the surveys). A summary

discussion of the results of these interviews can be found in the Discussion section of this article, as well as, the authors' insights into those responses.

## Results

Independent t-tests were used to analyze the survey results. The t-tests revealed that there was no significant difference (at the .05 level) in the attitudes of the two groups of students toward either reading or writing as measured by the surveys. The data analyses for student attitudes toward reading can be found in Table 1. As can be seen, the mean score for the whole language group (Building 1) was 3.0768; whereas, the mean score for the SIP group (Building 2) was 3.1250. The mean difference was -.0482. There was no significant difference between groups on the student survey ratings in reading at the $p < .05$ level.

**TABLE 1**

Mean Scores of the Garfield Test of Reading Attitudes

t-tests for Independent Samples of Building

| Variable | Number of Cases | Mean | SD | SE of Mean |
|---|---|---|---|---|
| **Score** | | | | |
| Building 1 | 28 | 3.0768 | .629 | .119 |
| Building 2 | 28 | 3.1250 | .621 | .117 |

Mean Difference = -.0482

Levene's Test for Equality of Variances: F = .132 P = .718

t-tests for Equality of Means

| Variances | t-value | df | 2-Tail Sig | SE of Diff | 95% CI for Diff |
|---|---|---|---|---|---|
| Equal | -.29 | 54 | .774 | .167 | (-.383, .287) |
| Unequal | -.29 | 53.99 | .774 | .167 | (-.383, .287) |

The data analyses for the students' attitudes toward writing can be found in Table 2. The mean score for the whole language group (Building 1) was 3.2339; the mean score for the SIP group (Building 2) was 3.2615. The mean difference was 0.0276. There was no significant difference in the student survey ratings in writing at the $p < .05$ level.

Subsequent interviews with selected second graders were conducted following the analysis of the data in order to determine incongruent classroom behaviors with survey responses. Children were interviewed if they rated themselves as totally happy (ratings of 4) with all aspects of writing and reading on the surveys, or if they had high PPVT scores (high aptitudes for verbal learning) but had an average mean response on the surveys of 2.5 or less, or if they had low PPVT scores (low aptitudes for verbal learning) but rated themselves as high (3.5 or above) on the surveys. These interviews yielded some interesting insights both into how young children view reading and writing, as well as, the questionable validity of using surveys with young children. For example, we found that some children who had high aptitudes for verbal learning as measured by PPVT scores rated writing as less favorable on the survey. When questioned about writing, interestingly, they viewed writing as the mechanical aspects of writing, such as letter formation and commented on how tired their hands got, rather than the linguistic or storytelling aspects of writing. Another curious aspect of our discussions with these second graders was that many did not consider phonics to be reading or even related to reading. Clearly, one cannot assume with young children that they are interpreting the survey items to have the same meaning as adults do. The results of these interviews provide exciting topics for future investigations into the attitudes and perceptions of

young readers and writers as well as more valid methods for ascertaining children's attitudes and beliefs than written surveys and Likert scales.

**TABLE 2**

Mean Scores of the Writing Attitudes Inventory

t-tests for Independent Samples of Building

| Variable | Number of Cases | Mean | SD | SE of Mean |
|---|---|---|---|---|
| **Score** | | | | |
| Building 1 | 28 | 3.2339 | .664 | .126 |
| Building 2 | 28 | 3.2615 | .673 | .127 |

Mean Difference = -.0276

Levene's Test for Equality of Variances: F = .111 P = .741

t-tests for Equality of Means

| Variances | t-value | df | 2-Tail Sig | SE of Diff | 95% CI for Diff |
|---|---|---|---|---|---|
| Equal | -.15 | 54 | .878 | .179 | (-.386, .331) |
| Unequal | -.15 | 53.99 | .878 | .179 | (-.386, .331) |

## General Discussion

This study investigated the differential impact of two methods of delivering phonics instruction on second graders' attitudes toward reading and writing. The findings do not support the argument that children receiving SIP versus whole language practice with embedded phonics have different attitudes toward reading and writing. Whether this data reflects the children's true feelings about reading and writing or whether the student responses are an artifact of using a survey to gain insight into perceptions and feel ıgs of young children is a worthy avenue of exploration in and of itself. Our one-on-one interviews with selected students lead us to question whether young learners regularly interpret the meaning of concepts like reading and writing as adults do. This difference in

meanings of terms could be readily seen when we asked students about writing, as some second graders discussed writing as solely the mechanical process of letter formation and did not discuss writing in terms of the meaning it conveys.

The study had other limitations as well. Perhaps, the most obvious is that attitudes develop over time and that a single evaluation of student attitudes toward reading and writing in the second grade may not reflect children's long-term attitudes. A longitudinal study of the development of attitudes toward reading and writing over time might give a more accurate picture of the effects of different instructional methods like whole language and SIP on the child's long-term feelings about reading and writing.

Another limitation of the study is that there were few students with high PPVT scores participating in the study as compared to students with low or average PPVT scores. This phenomenon was the result of the nature of the available population and certainly limits any ability to generalize the results.



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# Developing a Screening Instrument to Determine the Level of Prosocial Skill Development of First Grade Girls

Jean Fankell, Maureen O'Sullivan, Noreen Smyth, and Kathleen Usaj

Abstract

This study was designed to address educator concerns regarding children who demonstrate an inability to manage social relationships. A screening instrument was developed to determine the level of prosocial skill development in first grade girls. Naturalist observation of six first grade girls in four elementary buildings in the South Euclid-Lyndhurst Schools District was the primary method used to identify adequate and inadequate behaviors demonstrated by first grade girls. An item pool was developed and a rating scale was devised. The instrument will be used for the purpose of early identification and remediation of prosocial skills deficits. This action research is important due to the absence of research on prosocial skill development in elementary girls.

## Introduction

One of the major concerns named by educators in the past decade is the absence of appropriately developed prosocial skills in school-age children. Mussen and Eisenberg (1977) define prosocial in the context of demonstrating a propensity for engaging in positive social actions including, but not limited to, empathy, generosity, cooperation, caring for others, industriousness, compliance, an unaggressive approach to people and situations, and a concern for everyone's rights. Prosocial behavior is defined as those actions that are intended to aid or benefit another person or group of people without the actors anticipating external rewards. The development of prosocial behavior is the result of biological/genetic potentialities interacting with environmental/learning experiences.

The literature is replete with the reporting of an increasing number of at-risk children who demonstrate an inability to manage social relationships that involve interpersonal interaction and evidence of a capacity for empathy of others (Rose, 1980). Classroom issues concern the promotion of students from grade to grade who may be able to manage an academic curriculum, but who become increasingly deficit in critical functional life skills. Research supports that students lack the necessary age-appropriate prosocial skills required for adequate peer relationship development (Asher & Hymel, 1986; Helper, 1994). Much of the literature on this subject has either focused on comparative groups of males and females, or on males alone. Data identifying specific developmental female age-appropriate prosocial functioning appears unnecessarily vacant.

This study is important because of the need to identify at an early developmental stage atypical prosocial skill development in first grade girls in order to provide early intervention. In answering this problem, we will improve our ability to identify atypical expression of prosocial skill development in first grade female students in a systematic way through observation.

Statement of Problem

The purpose of this study is to investigate prosocial skill acquisition of first grade girls. This study is necessary due to the lack of research data on the specific behavior of first grade female students that indicate atypical prosocial skill development and the lack of normative data for gender comparison. The description of these behavioral problems suggest deprivation and describe children lacking analogs for strategies for socializing. This study will ask the question, "What are the prosocial skills needed by first grade female students in order to be adequately functioning?" The study will look at typically developing and atypically developing female children in unstructured contexts in order to develop a screening instrument that will allow the systematic identification of female students who demonstrate prosocial skill deficit.

Review of the Literature

The increasing interest in social interaction between children has been charged by supporting evidence that relationship difficulties in childhood are related to later maladjustment. The data supports that a lack of social skills play an important role in the development and maintenance of dysfunctional peer relationships. Blank, Prins, Sargeant, Ringrose and Brinkman (1996) state that the removal of social skill deficits will stimulate

peer relationships and ensure that children acquire competencies needed to achieve acceptance and to enjoy friendships. In addition, they purport that the prevention of the onset of maladaptive behavior by the use of appropriate behavior principles will result in a more favorable, self-reinforcing life situation. They state that attempting to remediate social deficits as they occur seems not only too late, but inadequate since the educational and therapeutic community appears unable to reduce the alarming rates of children who present unacceptable social development. In their view, social incompetence is related to several other areas of psychological dysfunction. In their study, a social adjustment disorder was operationalized as a lack of or frequently changing friends, social rejection or isolation, being often bullied or teased, socially anxious, exhibiting "extreme sturdy" behavior, fighting or bullying, or absence of skills on how to defend himself or herself. Their multi-site treatment-outcome study was effective in improving social behavior and improving peer relationships. An important finding was the improvement in peer relationships.

The importance of friendships in the development of socially competent behavior has also been stressed by researcher (Asher, 1990). The development of friendships is important for several reasons. Having a friend may alleviate the effects of prolonged peer group rejection. In addition, there is a strong relationship between the quality of friendships and adjustment. Blank, et al (1996) stated that this suggestion is supported by the notion that changes in social behavior will first become apparent in dyadic relationships. In their study, they suggest that an increase in the number of friendships may be a more valid indicator of change than an increase in general acceptance by peers.

It is simply not sufficient to have a reciprocal mutual nomination as a measure of friendship. Friendships are specific forms of attachment and the conceptual rules that govern them are different from those governing other social relationship.

The threshold of social skill knowledge required for entry into a friendship relation has yet to be determined (Bigelow, Tesson, & Lewko, 1996). They believe, however, that social skill deficiencies pertinent to the accomplishment and maintenance of a friendship also place the child at risk for concurrent and later social-emotional difficulties. Asher & Williams (1987) concur that the ability to enter into and sustain successful friendships demonstrates the skills of building trust, similarity, goal compatibility, feeling good about oneself, and skillful mutual influence. It, therefore, follows that the making of friends is a critical prosocial skill.

The literature supports that poor peer relations are predictive of later social competence problems. Morris, Messer, and Gross (1995) have shown two distinct groupings of children experiencing problems with peer relations - those who are rejected and those who are neglected. These terms were defined as isolated by the peer group (rejected) and isolated from peers (neglected). According to their study, rejected children have been found to engage in relatively high rates of aggressive and disruptive behavior. Other evidence suggests that neglected children may be at risk for concurrent and later social-emotional difficulties; neglected girls were five times as likely to report depressive symptoms when compared to average girls. Morris, et al. (1995) stated that these children are typically described as shy and withdrawn. Neglected girls are reported to have displayed deficits in social information processing. These children have been

described as poor leaders, less cooperative, more likely to break school rules and perform inefficiently on academic tasks. Socially withdrawn children paired with socially active peers from different classroom for free-play interaction sessions showed no beneficial effect. However, the authors noted that results may have been different if familiar peers were used.

A behavioral coding scheme was utilized by Morris, et al (1995) to obtain ratings of positive social interaction and negative social interaction with familiar peers. Positive interaction was defined by all positive vocalizations directed to another child and all cooperative responses involved with sharing. Negative interaction was defined as all utterances that indicate rejecting and oppositional behavior. Results of their study revealed significant improvement for treatment group subjects on both sociometric status and positive interaction rate. It follows that positive communication is another critical prosocial skill.

In "The Flight From The Laboratory" (1972), B. F. Skinner supports action research in that very basic research may disclose important facts which can be generalized to prevent the rise of problems. By discovering what basic prosocial skills the average first grade girl demonstrates, we are then able to remediate those girls who demonstrate inadequate prosocial skill development in a preventative manner. Miller and Cheny (1996) support the need for preventative measures so that children may be able to employ preventative actions. Our development of a prosocial skill screening instrument is the first step in that process. Two categories of social skills have been selected for

observation, making friends and communication, as research has shown these to be the critical components of prosocial skill development.

Statement of Goal

This study will describe how typically developing and atypically developing first grade girls display social skills by observing the girls in unstructured contexts. The observation will be expected to allow the researchers to determine behavioral items that will differentiate between adequately functioning and inadequately functioning first grade girls in prosocial skill development.

## Method

Subjects

Subjects will be selected from a population of first grade students in the South Euclid-Lyndhurst City School District. Four of six elementary buildings will be chosen for sampling. The population in this district is primarily suburban.

Students will be obtained by teacher selection. Two descriptive prosocial skill categories, communication and making friends, will be operationalized. Teachers will identify the female students who exhibit adequate prosocial skill development in communication and making friends at a first grade level and the female students who exhibit inadequate functioning in these two areas. One female student from each category will be selected in four elementary buildings matched by age and ability. The Peabody Picture Vocabulary Test will be used to match students with average intelligence. Students achieving a Standard Score in a range of 88 to 96 on this instrument will be selected. A three-month age span will be used as the age range for

matching subjects identified with average intelligence. Students who have a birth date that falls between March 22, 1990 and June 13, 1990 will be selected.

Instruments

Naturalistic observations were used as a method of data collection. Students with two types of prosocial skills were observed in an unstructured setting (lunch recess). Two types of prosocial skills were categorized: communication and making friends. Both types of students were videotaped during recess period. Observations of each videotape were conducted in order to obtain descriptive data regarding adequate and inadequate functioning in prosocial skill development. The descriptive data was analyzed to develop items to form a screening instrument. The instrument was utilized to identify first grade girls in South Euclid-Lyndhurst City Schools who demonstrate inadequately developed prosocial skills in the areas of communication and making friends.

Procedures

Six subjects from four buildings were videotaped for thirty minutes during lunch recess. Six videos were reviewed. Three subjects were identified with adequately developed prosocial skills and three subjects were identified with inadequately developed prosocial skills. Behaviors observed by the experimenters on the videotapes were described for each category of adequate and inadequate prosocial skill functioning. The inadequate list of prosocial skills were evaluated by the experimenters in order to reach consensus for behaviors that were present. The inadequate behaviors were compared with the descriptions of the adequate behaviors that were observed for the purpose of

determining the presence of the opposite or adequate behavior for each inadequate behavior observed and described.

The behavioral descriptions were divided into two categories: "Friendship Making" and "Communication". In these categories, each behavior was operationalized. Each behavioral description was polarized on a continuum representing adequate and inadequate prosocial skill development (see Appendix).

The intensity of the observed behaviors described in each item was determined by a rating of 0 to 6. For each inadequate or below average behavior, a score of 0 to 2 was possible. For each adequate or average behavior, a score of 3 was given. Above average, adequate behavior received a score of 4 to 6. The lower the score, the greater the inadequacy of functioning. The higher the score, the greater the adequacy of functioning. The range of scores possible for the each scale representing inadequate prosocial skill development in the areas of "Communication" and "Friendship Making" was 0 to 30. The average score was determined within a range of 31 to 59, with a mean score of 45. An above average score fell within a range of 60 to 90. The videotapes were then reviewed to determine the presence of inadequate or adequate behavior. The behaviors were rated by each experimenter using the scales to determine the level of prosocial skill development for each subject.

To determine the reliability of the instrument, classroom teachers rated their selected students using the rating scales. A rating was obtained for six students in two categories.

## Results

The results of the study showed that the students identified with inadequate prosocial skill development through teacher selection and rated by the experimenter achieved a mean score of 32 for Friendship Making and a mean score of 32 for Communication. The reliability rating performed by the teacher of each selected student produced a mean score of 43 for Friendship Making and a mean score of 42 for Communication. Each student identified with adequate prosocial skill development received an experimenter rated mean score of 70 for Friendship Making and 72 for Communication. Each student identified with adequate prosocial skill development received a teacher rated mean score of 78 for Friendship Making and 85 for Communication.

## Discussion

The results of this study suggest that a systematic analysis of prosocial skill development is possible through an analysis and comparison of observed typical developing behaviors through the conceptualization of two scales, "Communication" and "Friendship Making". An instrument was developed that allowed for the identification of behaviors that fall below expected limits in prosocial skill development of first grade girls. The reliability of this instrument is contingent on a familiarity with the student and observational information gathered across multiple unstructured environments. These instruments were developed for the purpose of teacher-use in identifying specific behaviors that interfere with student adjustment in a school environment and in determining the acquisition of critical prosocial skills that allow a

child to competently form friendships and exchange appropriate two-way communication. The development of this instrument is the first step in a process of determining prosocial skill development in first grade girls to be followed by intervention prescriptions to remediate those girls who demonstrate inadequate prosocial skill development. At this point of research, these rating scales appear to serve the purpose of discriminating behavioral items that differentiate between adequately functioning and inadequately functioning first grade girls in two significant areas of prosocial skill development, "Friendship Making" and "Communication".

Limitations of the Study

Several limitations are apparent in this study. First, the sample size is significantly small. In order to further evaluate the validity of the instrument, further research is needed to address the reliability of the item pool on a larger number of first grade girls represented in both categories of adequately functioning and inadequately functioning in prosocial skill acquisition. Second, it seems necessary to expand the observational data collected in the development of the item pool. There is also a need to further improve and quantify our scorer reliability. In order to expand our knowledge of prosocial skill acquisition of first grade girls, it would be necessary to observe functioning across a wide variety of contexts that includes structured as well as unstructured settings.

## Conclusion

In an effort to address the concerns of educators regarding the vast number of at-risk children who demonstrate an inability to manage social relationships that involve

interpersonal interaction and evidence a capacity for empathy of others, this study was designed. Specifically, the study addressed the need to identify at an early developmental stage atypical prosocial skill development. Due to the absence of information related to specific female developmental age-appropriate functioning in the literature, the study addressed the acquisition of prosocial skill development in first grade girls in two significant areas of prosocial skill development found in the literature, "Friendship Making" and "Communication".

The results of the study produced an item pool of behavioral descriptions that differentiate between adequately functioning and inadequately functioning prosocial skill development in first grade girls on a continuum of functioning. In this first phase of development, the instrument which resulted in two scales, "Friendship Making" and "Communication" has shown to produce scores that identify inadequate and adequate prosocial skill development. This instrument will be utilized as a "teacher tool" to aid in identifying specific deficient behaviors that require intervention design for replacement behavior remediation in two areas of "Friendship Making" and "Communication". In addition, the instrument can be utilized as a pre and post test assessment to monitor progress of intervention design as a result of an initial assessment of prosocial skill acquisition.

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# APPENDIX

## First Grade Girls Prosocial Skills Screening Instrument

Description of instructions for administering scales:

Directions for Rating: Rate the student relative to the intensity of the behavior you have personally observed on 15 items on the "Friendship Making Scale" listed below. Give each item one numerical rating only. It is necessary to be familiar with the student for a minimum of eight weeks before using this scale.

**For each inadequate, below average behavior, use a score of 0-2. For each adequate or average behavior, use a score of 3. For each adequate or above average behavior, use a score of 4-6. Any behavior listed on the scale, but not observed by you, should be rated with a "3".**

Example:

1. **engages in solitary play** ... **engages in cooperative**

| always | frequently | sometimes | | average | | sometimes | frequently | always |
|---|---|---|---|---|---|---|---|---|
| 0 | 1 | 2 | | 3 | | 4 | 5 | 6 |

# Friendship Making Scale

1. Engages in solitary play — Engages in cooperative

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

2. Roams around the room at acceptable proximity — Appropriately organized play

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

3. Intrusiveness into other's space — Respects personal boundaries of others

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

4. Does not engage with others in play — Engages with others in play

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

5. Grabs objects out of the hands of others — Respects the property of others

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

6. Dominates when involved with others with others — Takes turns when involved

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

7. Demanding/Imposing — Able to delay gratification

| always | equently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

8. Coughs in another's face — Covers mouth when coughing

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

9. Tolerated by peers - not welcomed ... Welcomed & accepted by peers

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

10. Not connecting to objects or people ... Connecting/relating to objects people

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

11. Impulsivity - exaggerated behavior responses ... Organized & appropriate responses

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

12. Does not engage in activity for more than 1 minute ... Engages in activities for an appropriate amount of time

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

13. Lethargic ... Enthusiastic & energetic

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

14. Rejected by peers ... Accepted by peers

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

15. Ignored by peers ... Acknowledged by peers

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

# COMMUNICATION SKILLS

1. Makes negative comments — Makes positive comments

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

2. Excessive body movement — Focused & organized body movement

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

3. Uses a loud voice — Moderate cadence in tonality

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

4. Does not recognize or interpret social cues — Recognizes & interprets social cues

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

5. Uses negative facial gestures — Uses appropriate facial gestures

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

6. Has inconsistent eye contact with others — Has consistent eye contact with others

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

7. Inappropriately touches adults — Initiates appropriate physical contact with adults

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

8. Inappropriate touches peers physical contact — Initiates appropriate with peers

| always | frequently | sometimes | average | sometimes | frequently | always |
|---|---|---|---|---|---|---|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 |

9. Shouts out

always frequently sometimes average sometimes frequently always

0 1 2 3 4 5 6

Waits for a turn to speak

10. Stares

always frequently sometimes average sometimes frequently always

0 1 2 3 4 5 6

Purposeful observation of other's interaction

11. Has body turned away from peers in nonverbal communication w/peers

always frequently sometimes average sometimes frequently always

0 1 2 3 4 5 6

Receptive body stance posture in nonverbal communication w/peers

12. Rarely initiates conversation with others

always frequently sometimes average sometimes frequently always

0 1 2 3 4 5 6

Initiates conversation with others

13. Sloppy-sluggish in nonverbal nonverbal body language

always frequently sometimes average sometimes frequently always

0 1 2 3 4 5 6

Positive and attentive body language

14. Does not "introduce" self appropriately

always frequently sometimes average sometimes frequently always

0 1 2 3 4 5 6

"Introduces" self appropriately

15. Avoids interaction with others

always frequently sometimes average sometimes frequently always

0 1 2 3 4 5 6

Seeks out interaction with others

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Opera Program

Darryl Innocenzi
Helen Lauro
Cathy Stang

Abstract

The following study is an examination of the effect of creating and implementing an original year long curriculum-based opera on fifth grade students' attitudes toward school. The study compares the attitudes of fifth graders who were taught using three different strategies. These strategies included project-based integrated curriculum, traditional methods of instruction, and the opera program. The study found that students who participated in the opera program had a significantly more positive attitude toward school than students in the other two programs.

## Statement of Purpose

The purpose of this study was to see if the students who participated in creating an original opera using the different components of the current fifth grade curriculum had a more positive attitude toward school than the students who participated in other programs.

## Research Question

Is there a significant difference in fifth grade students' attitudes toward school if they are exposed to the same instructional content using project based integrated curriculum, traditional instructional methods, or the opera?

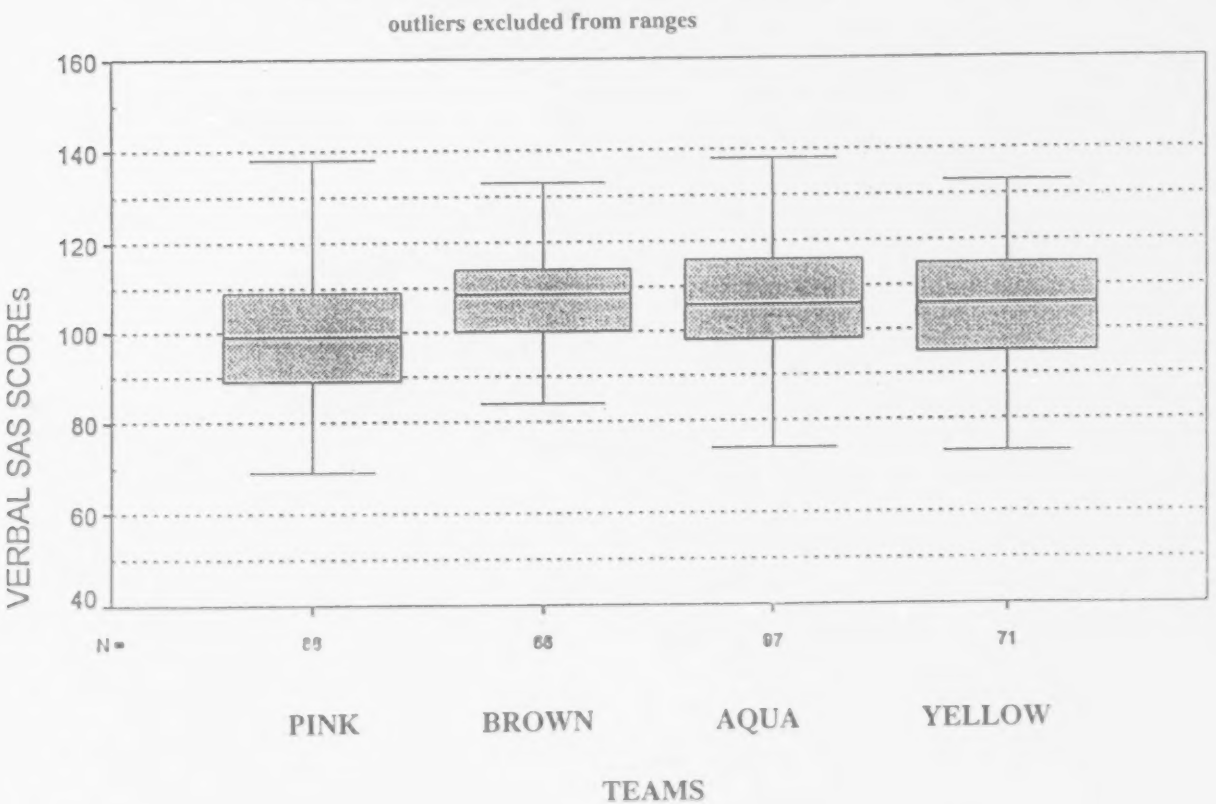
## Participants

Students in this study were from Greenview Upper Elementary School which houses all of South Euclid-Lyndhurst school district's fifth and sixth grade classes. This district is a suburban district east of Cleveland, Ohio. Approximately seven hundred fifth and sixth grade students attend Greenview. There are about 2.7% Asian, 16.4% African American, 1.0% Hispanic, .2% American Indian, 1.9% Multiracial and 77.8% Caucasian students in attendance. There are fourteen fifth grade classrooms and twelve sixth grade classrooms with an average class size of twenty-six students. Classrooms are grouped into four teams consisting of three or four teachers for each grade level. Our study focused on three of the fifth grade teams, the Yellow team, the Brown team and the Aqua team. The Yellow team has three classroom teachers and 71 students, the Brown team has three classroom teachers and 70 students and the Aqua team has four classroom teachers and 99 students. Teams were selected because their students had similar mean

Verbal Standard Age Scores on the Cognitive Abilities Tests. Figure 1 employs four box-and-whisker plots which illustrate the distribution of scores in each of the four teams. Figures 2-5 present these same teams' scores on both stem-and-leaf plots and in numeric form (Means, Medians, and Standard Deviations). Based on the comparison of team scores, the Pink team was eliminated from the study, as its mean was noticeably below the mean of the other three groups (Pink mean = 98.3488; Brown mean = 107.5152; Aqua mean = 106.3814; and Yellow mean = 104.4225).

**Figure 1**

**Comparison of Verbal SAS Scores by Teams**
**Using Median Points, Quartile Points, and Ranges**



## Figure 2

Stem and Leaf Plots of Verbal SAS Scores by Team Color

*Pink Team*

| Frequency | Stem & Leaf | | |
|---|---|---|---|
| 1.00 Extremes | (57) | **Mean:** | **98.3488** |
| 1.00 | 6 . 9 | **Median:** | **99.0000** |
| 6.00 | 7 . 356688 | **SD:** | **14.0861** |
| 14.00 | 8 . 02233345788899 | | |
| 24.00 | 9 . 01122222223455677799999 | | |
| 21.00 | 10 . 001111233455666778999 | | |
| 16.00 | 11 . 2222333555677789 | | |
| 2.00 | 12 . 24 | | |
| 1.00 | 13 . 8 | | |

Stem width: 10.00
Each leaf: 1 case(s)

## Figure 3

*Brown Team*

| Frequency | Stem & Leaf | | |
|---|---|---|---|
| 7.00 | 8 . 4556689 | **Mean:** | **107.5152** |
| 9.00 | 9 . 223457899 | **Median:** | **108.5000** |
| 18.00 | 10 . 000123335556777789 | **SD:** | **12.5615** |
| 25.00 | 11 . 0000000000233344567999999 | | |
| 3.00 | 12 . 356 | | |
| 3.00 | 13 . 133 | | |
| 1.00 Extremes | (144) | | |

Stem width: 10.00
Each leaf: 1 case(s)

## Figure 4

*Aqua Team*

| Frequency | | Stem & Leaf |
|---|---|---|
| 1.00 | Extremes | (71) |
| 1.00 | | 7 * 4 |
| 2.00 | | 7 . 89 |
| 4.00 | | 8 * 0012 |
| 3.00 | | 8 . 599 |
| 7.00 | | 9 * 0222344 |
| 11.00 | | 9 . 66777888899 |
| 15.00 | | 10 * 000000111222234 |
| 10.00 | | 10 . 5556678899 |
| 17.00 | | 11 * 00000222233333344 |
| 11.00 | | 11 . 66666778999 |
| 5.00 | | 12 * 00024 |
| 5.00 | | 12 . 55666 |
| 2.00 | | 13 * 02 |
| 1.00 | | 13 . 8 |
| 2.00 | Extremes | (149) |

Stem width: 10.00
Each leaf: 1 case(s)

**Mean:** 106.3814
**Median:** 106.0000
**SD:** 14.7616

## Figure 5

*Yellow Team*

| Frequency | | Stem & Leaf |
|---|---|---|
| 1.00 | Extremes | (64) |
| 2.00 | | 7 . 33 |
| 9.00 | | 8 . 124457889 |
| 15.00 | | 9 . 034455567778899 |
| 16.00 | | 10 . 0012335567778999 |
| 18.00 | | 11 . 001122335555688889 |
| 7.00 | | 12 . 0122278 |
| 3.00 | | 13 . 133 |

Stem width: 10.00
Each leaf: 1 case(s)

**Mean:** 104.4225
**Median:** 106.0000
**SD:** 14.6888

## Instrument

The instrument used to ascertain student attitudes was a Likert scale attitudinal survey of fifteen questions. This survey measures student attitude toward "self when in school". It was previously used and reliabilities established with primary grade students. The original survey had children rate their attitudes by marking a face which reflected their attitudes. Five faces ranged in degrees from a smile to a frown. For our purposes, we changed to a numerical response of one through five, one being extremely happy and five being extremely unhappy. The reliability (coefficient Alpha) of the survey with smile faces when used with forty-four primary age students was .8539. Since the reliability of this instrument is so high and it is designed to measure the construct we were interested in, we chose to use it.

## Procedures

During the summer of 1996, three teachers were able to attend a week long workshop on Creating Original Opera at Princeton University. This workshop was provided by Education at the Met, a department of the Metropolitan Opera Guild. Through funds from a Venture Capital Grant, a classroom teacher, an art teacher and a music teacher were sent to this teacher training program.

At the beginning of the 1996/1997 school year, the classroom teacher who attended the training prepared the other three teachers on her team to implement the creation of an opera. The four teachers on this team directed the students in the selection of their theme of "betrayal set during the American Revolutionary time period." The entire process from creation to production took the whole school year.

Each of the four teachers on the team, with the help of the art and music teacher, directed various groups of students. The seven groups consisted of writers, public relations, electricians, set designers, composers, performers and costume designers. In addition, five students worked together as production managers. The entire team of students was involved in the process of theme selection, setting and character development. The teachers felt it was essential that each student had ownership of the opera and was involved in the process at its inception and had knowledge of the building blocks before going off to work on their specific component of the opera. A team of twenty-two writers worked with two teachers to develop a story line, write the script, and the song lyrics for the opera. When the song lyrics were completed, nine composers worked with the music teacher to create an original score for the opera. During this time, a group of fourteen electricians studied circuitry with one teacher. They wired, complete with dimmer switches, five sets of footlights for the stage. Another teacher worked with fourteen set designers measuring the stage and making maps to scale prior to receiving the script. After they received the final script, the set designers designed, constructed and painted the entire set. Twelve public relations students were responsible for promoting the opera. They made programs, designed T-shirts, contacted area businesses, radio and television stations; and senior citizens homes. One teacher was responsible for teaching these students telephone and communication skills. The costume designers worked with a teacher to design and sew costumes. They also learned application of makeup and applied it to the performers for each of the six performances. Fourteen performers under the direction of two teacher worked on improvisation, memorization of lines, projection

of voice for speaking and singing, and use of body language. Each of the fourteen performers portrayed one of the seven characters in the opera. Each of the two casts performed the opera three times. In addition, three teachers took on the task of choreography. Since each of the ninety-nine students were on the stage at some point in the opera, lessons on choreography had to be taught. Production managers assisted the teachers backstage during the performance to insure a smooth production. Prior to the performance, production managers assisted in other groups on an as needed basis.

The opera created a sense of community among students, parents and teachers. It provided an opportunity for parents to become actively involved in the education of their children. Parents became an integral part of costume designers, set designers, public relations, and electricians. During rehearsals and performances, many parents helped with supervision of students and implementation of the opera. Without the invaluable help and support of the parents, the opera would not have been as successful as it was. Parents brought with them an expertise and an enthusiasm that became infectious.

After the six performances of the opera had been completed, the attitudinal survey was given to the students on all three teams. This included the Yellow team which implemented project-based integrated curriculum strategies, the Brown team which implemented traditional strategies and the Aqua team which implemented the curriculum-based opera strategies.

## Results

Two hundred thirty-one Yellow team students were part of the sample that completed the fifteen question survey. A one-way ANOVA revealed that children who

participated in the opera had a significantly better attitude toward school than students in the two other groups ($P < .05$). The mean score of the fifteen items on the survey for the Yellow team was 2.7332 and for the Brown team was 2.7096 showing no significant difference. The mean score for the Aqua team was 2.4916 showing significant difference. The lower the score, the greater the degree of student satisfaction with school. According to the survey results, the Opera team students showed a significantly more positive attitude toward school in general than students on the traditional or project based integrated curriculum teams.

## Discussion

Having created an original curriculum-based opera, the participating students showed signs of having a statistically significant more positive attitude toward school than those students who did not participate in the opera program. This more positive attitude can be attributed to many and varied factors. During the process, the students became active learners taking ownership and responsibility for their learning. Teachers on the Aqua team noticed a strong sense of pride and camaraderie among their students. Teachers were viewed as facilitators and coaches by the students. Though the use of this program, teachers were able to use strategies that incorporated the seven multiple intelligences. Students were able to choose which facet of the opera in which to participate. This gave all students a sense that they could successfully contribute to the production of the opera. The students were afforded the opportunity to capitalize on their individual strengths which appeared to boost their self-esteem. Another factor which seemed to lead to a more positive attitude among Opera group students was the fact that

at the conclusion of the school year, parents, other students and community members could see their finished product. The feedback they received from these segments of the population also appeared to contribute to increase their self-esteem. Students began to realize and experience how their independent branch of responsibility for the opera became interdependent with all other branches of responsibility to create a finished product. A strong sense of community was developed among parents, teachers and students on the Aqua team. The production of the opera became a truly collaborative effort with all parties working toward a common goal.

We will also be assessing how well students from the three teams retained and conceptualized information on the academic information and themes from the Revolutionary War. Our plan is to test students from all three groups on this information in November of this year, six months after the close of the 1996/97 school year. We are interested in knowing if the Opera resulted in children retaining more information about the Revolutionary War over time, than the other two instructional methods. When we compare the students recall of this information, we know we plan to statistically adjust for the differences in the verbal Standard Age Scores of the students in the different group (see Figures 2-5).

# The Impact of Multicultural and Non-Multicultural Educational Settings on the Attitudes of Students Toward Minority Students

Ginette Kuper-Lewis

## Overview of Research and Findings

People often have preconceived ideas about members of different cultures. Diana Mayer Demetrulias (1990) sampled 349 future teachers and gave them a survey where they were asked to rate an author's ability to communicate his ideas. All of the future teachers received the same excerpt. However, the authors of the essays had distinctly different ethnic surnames (Chin, Silverstein, Abdullah, Rodriquez, etc.). Demetrulias concluded that "characteristics such as ethnicity, gender, physical attractiveness, and socio-economic status influence teacher judgments and educational decisions" (1990). The results of Demetrulias' study concluded that the American or English names of Miller and Armstrong ranked in the top three. The Hispanic surnames ranked last. The research supports the hypothesis that people have preconceived notions about people from different cultures.

Renee Jeanne Martin and Kent Koppelman (1991) attempted to "determine the impact of mandated human relations courses upon the attitudes of prospective teachers regarding issued of diversity" (pg. 11, 1991). They concluded that a human relations course can have a positive influence by increasing people's sensitivity toward diversity. Martin and Koppelman's study (1991) suggests that educational experiences can influence people's attitudes towards other cultures.

Deborah L. Thompson and Jane W. Meeks' (1990) research suggested that teachers would benefit from multicultural education. These researchers studied literature as a means to helping children gain an understanding of themselves and of others. The

question Thompson and Meeks asked, "Are teachers familiar with multi-ethnic literature, and if so, how is it used in the classrooms that are touted to be literature-based?" (1990). The results of this study suggested that the majority of the teachers weren't familiar with many multi-ethnic literature books. The only exception was the use of African-American books in the classroom, and even this was limited. Native-American and Hispanic-American books were categories that drew the fewest positive responses. The results of this study by Thompson and Meeks (1990) suggests that teachers do not have enough knowledge of multicultural literature to employ it as an instructional tool in their classrooms.

Research done by Dolores Mei and Heriberto Watson (1989) also discussed the importance of learning about and accepting different cultures. The New York City Board of Education began magnet school programs with the belief that "students with different racial and ethnic backgrounds could share common academic interests" (Mei and Watson, 1989). The goal of the program was to "enhance motivation which would lead to an increase in achievement and better relations among different racial and ethnic groups and positive attitudes toward the magnet program" (Mei and Watson, 1989). They measured an increase in achievement and better relations among the different racial and ethnic groups. The results were that all four magnet schools met the attendance objectives and three out of four of the schools exceeded the achievement objectives.

There has been considerable research done in the area of multicultural education in the past decade. Meeks and Thompson (1990) found that "many teachers reported that they need further training in becoming familiar with children's literature that reflects the

country's cultural diversity." After this study was concluded, Meeks and Thompson began developing staff development activities in this area.

Research Question

Is there a significant difference in the attitude toward other cultures of fourth grade elementary school students who are part of a multiculturally diverse classroom setting compared to fourth grade elementary school students who are not part of a multiculturally diverse classroom setting?

Subjects

The sample for this study included all the fourth grade students at Lowden Elementary School, which is approximately 77% minority, and all the fourth grade students at Ridgebury Elementary School, which is approximately 5% minority.

A total of 35 fourth grade students from Lowden Elementary School participated. Of these 35 students, 27 were African-American and 8 were Caucasian. (Five students were absent the day the study was conducted.) A total of 42 fourth grade students from Ridgebury Elementary School participated in the study. One student was African-American, 37 were Caucasian, and 3 were Asian. All the fourth grade students at Ridgebury Elementary School were in attendance on the day the study was conducted and all did participate.

Instrument

A photograph used in an AT&T advertisement found in the February 1997 issue of Ebony Magazine was used as part of the instrument for this study. The photograph showed four African-American children dressed in more traditional African clothing.

The children were dancing, jumping, and smiling. The setting was a room with party decorations hanging from the ceiling.

The instrument also included a cover sheet asking the child's name, code number, gender, race, grade, and building and a set of directions asking the student to examine the picture and to write a paragraph as to why they would or would not like to be friends with the children in the picture. A second part of the study asked the subjects to write what kind of friends they think the children in the picture would be.

Design

A letter was sent to fourth grade teachers at both schools explaining the purpose of the study and asking for their participation. The same letter was sent to the principals of these schools. There were positive responses from all four teachers and their principals.

Five fourth grade students from another non-participating school were randomly selected to pretest the instrument. They were given the photograph to look at and directions that included two parts. The first part asked the students to write a story in detail describing what might be happening in the picture. The second part asked the students to write whether or not they would like to be friends with the children in the picture, and to explain their response. Based on the information and performance of these four children, the instrument was revised. The revised instrument deleted the first part of the directions because the written responses from the pretest subjects did not elicit information pertaining to the purpose of the study.

A letter was then sent to all the parents of the test subjects explaining the study, their child's participation and, insuring the anonymity of all the test subjects.

A standardized set of directions was given to the fourth grade teachers. The directions explained how to pass out the instrument, how to direct the students to read their standardized directions, how to complete the cover sheet, and how and when to return the completed written responses.

Each packet the children received included a cover sheet, the same picture and directions on how to respond to the picture, and writing paper with a code number on it. When the students completed the writing, the teachers were asked to send the written responses to the researcher and the cover sheet to the director of the research program. Since all student response sheets had code numbers on them, the researchers did not know the identity of the child or the building the child came from.

At Lowden Elementary School, the school with the higher minority population, 20% of the students responded that they would not like to be friends with the children in the picture. At Ridgebury Elementary School, the school with the 5% minority population, 36.8% of the students responded NO, they would not like to be friends with the students in the picture.

There is a difference in the response between the two buildings. However, it is not a statistically significant difference (at $P < .05$).

Of all the test subjects from both buildings who responded NO to the question of whether or not they would be friends with the children in the picture, 24% were written

by African-American students, 76% were written by Caucasian students, and 0% were written by Asian students.

Discussion

The results of this study do not conclusively support the original hypothesis: children in a multiculturally diverse classroom setting have a more positive attitude toward other cultures than students who are not part of a multiculturally diverse classroom setting. The results of the two schools did not suggest a significant difference. One reason for the lack of significant difference is the small population which was used. This study might be replicated using more students. There might then be a significant difference.

Worth noting are common themes that reoccurred throughout the children's responses as to why or why not they would want to be friends with the minority children in the picture. One positive theme was that the children look like they are having fun. Another positive theme was that people can learn from other cultures. Two negative themes commonly reported were that the children in the picture seemed "too different" from the respondents to be friends with them, and that the children in the picture seemed "wild." (Also, important to this note is that 26% of all the students from both buildings made a reference to the race of the children in the picture).

This study might provide interesting results if it were replicated with more subjects. Another step would be to look at the impact of multicultural instruction on negative beliefs like the children are "too wild" or "too different."

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# A Descriptive Study of Interactions Between Typically Developing Peers and Handicapped Children in a Special Education Preschool Setting

Anita Melfi Visoky

Beth Dickerman Poe

## Abstract

A descriptive group design study was conducted to determine the amount and types of interactions that occur between typically developing children and handicapped peers in a special education preschool setting. Two hundred minutes of observations were recorded targeting the typical peers as the objects of observation. Recording of observations occurred in 20 minute sessions, with each of four peers being observed in 15 second intervals.

Results revealed that the peers spent approximately half the observation time interacting,.with others and half the time not interacting. Of the time spent interacting, almost half of their interactions were with handicapped classmates. The majority of interactions were positive or neutral verbal exchanges, and occurred most frequently within the quiet/investigative areas, construction areas, or dramatic play areas. These results were similar to previously conducted research studies and revealed to the authors of this study that the peer models in our program are providing a"modeling component" for our handicapped students, despite the lack of a formal training component for the peer models.

## Introduction

In recent years, there has been an increased awareness of the benefits of educating handicapped children with their typically developing peers. Schools across the country are moving towards inclusive practices, and parents are more frequently advocating that their disabled children be educated in neighborhood schools. The benefits of inclusive education for both handicapped and non-handicapped children are discussed by numerous researchers and practitioners (Blackman, 1991; Hanline & Murray, 1984). In an inclusive setting, the handicapped children are able to learn appropriate communication, play, and interactive skills from their peers (Guralnick & Groom, 1988). Many researchers feel that the ability to interact appropriately with peers is significantly tied to cognitive, communicative, and social development (Guralnick, 1993).

In 1986, federal legislation, PL 99-457, was passed requiring school districts to provide early intervention services to preschool aged children with documented disabilities. Many therapists, teachers, and parents of young children receiving these services attest to the short-term benefits of early intervention programs. In addition, a variety of researchers have documented long-term benefits of early intervention, which impact both the children themselves and the community as a whole (Bracey, 1996; Sweinhart, Berreuta-Clement, Barnett, Epstein, & Weikart, 1985). Since researchers have noted that peer acceptance of handicapped students is greatest during preschool years (Field, Goldberg, Stern, & Sosteck, 1980; Goodman, Gottleib, & Harrison, 1972), this appears to be an ideal time to begin integrating of handicapped students into

traditional settings and to introduce differences in ability levels.

In 1991, the South Euclid-Lyndhurst Schools opened a non-categorical special education preschool program, incorporating typically developing children as peer models. Parents and staff members have made subjective observations as to the benefits of having peer models participate in the program. A formal peer model training component has not been incorporated into our program. Rather, the interactions between typically and non-typically developing youngsters are left to occur naturally or are incidentally guided by the teachers. This naturalistic approach to facilitating interactions is consistent with "best practices" guidelines, which suggest that services and instruction be incorporated into normal school routines (McDonnell & Hardman, 1988).

*Review of Related Literature*

Current research indicates several characteristics of social interactions among typically developing preschool children. During observations in a typical preschool, van den Pol, Crow, & Rider (1985) found that children play alone only one-fifth of the time. Greenwood, Walker, Todd, & Hops (1981) note that preschool children interact with each other about half the time during play. Half of those interactions are initiations, meaning that the child begins the interaction, and half are responses. Despite individual variability in frequency of initiating, by age three, children are able to initiate interactions and respond successfully 90% of the time (Greenwood, et al, 1981). Guralnick & Weinhouse (1984) cite numerous studies which indicate that older preschool children interact more frequently and in more sophisticated ways than do younger preschool children. Different environmental factors affect the type and amount of social interaction

among preschoolers. These include the proximity of the children, amount of structure and type of play (Lowenthal, 1996) and type of toys (Martin, Brady, & Williams, 1991). During the course of a school year, interactions among children increase over time (Beckman & Kohl, 1987), since children interact more when they become more familiar with one another (Doyle & Connolly, 1980). Adult presence influences the amount of interaction between children (Rice, Sell, & Hadley, 1990; Hundert, Mahoney, & Hopkins,1993).

Other comparisons can be made between the seemingly natural social tendencies of handicapped and non-handicapped preschoolers in integrated settings. In the absence of adult facilitation, interactions between handicapped and non-handicapped children do occur; however, spontaneous social interactions among non-handicapped children occur more frequently (van den Pol, et al, 1985). In general, handicapped children participate in fewer interactions than their non-handicapped peers (Guralnick & Weinhouse, 1984; Beckman & Kohl, 1987). Handicapped children are more likely to initiate interactions with adults than children, and to respond non-verbally and to use shorter responses (Rice, Sell, & Hadley, 1991). Typical children adjust the complexity of their language according to the developmental level of the listener (Guralnick & Paul-Brown, 1977; Guralnick & Paul-Brown, 1980). The severity of a child's handicap impacts the amount of social interaction with peers (Guralnick, 1980; Guralnick, 1981b).

*Statement of the Problem/Specific Purpose*

Given the unique mix of disabled children in our own non-categorical preschool, many of the research findings on social interaction probably apply to our population, while others may not. The purpose of this study is to determine the amount and type of interaction that occurs naturally between the peer models and the handicapped children within our preschool program. This will enable us to describe the interactions as they occur in a setting where naturalistic intervention, primarily in the form of incidental teaching, is being used to promote children's social interactions. Research shows that teachers are more likely to employ naturalistic types of interventions to facilitate social interactions than intensive individual interventions (Odom, McConnell, & Chandler, 1994). However, research on the use of incidental teaching to promote social interactions has been limited to date (Brown & Odom, 1995). This study will add to our knowledge of the numbers and types of interactions that occur between peer models and handicapped children, when incidental facilitation of social interaction, as opposed to a formal training program for peer models, is used in a preschool program.

## Method

This study was designed as a descriptive, group design to observe and analyze what is currently happening naturalistically within our preschool classrooms between disabled and non-disabled peers. We studied certain groups of children to determine how much and to what degree interactions occurred.

*Subjects*

The subjects in this study consisted of preschool children ranging in age from three to six years. These children all attend a non-categorical, special education, integrated preschool, located in a suburban public school setting. The preschool program consists of six half-day classes with twelve children in each class. Of the twelve children, eight are identified as disabled with documented deficits in at least one of the following areas: speech-language, cognitive skills, gross and fine motor skills, adaptive behavior, social-behavioral development, vision, or hearing. Children are found eligible for special education preschool services if they fall two standard deviations below the mean on assessments in the above areas, or one and a half standard deviations below the mean in two or more of the above areas. Some of the children in the program have diagnosed disorders such as pervasive developmental disorder or autism, cerebral palsy, and Down Syndrome, and classroom compositions are heterogeneous.

The remaining four children in each classroom make up the "peer model" component of the program. A screening is conducted each spring to find typically developing peers with at least average skills in communication, socialization, and motor domains to be models for the disabled children.

Two classrooms were chosen by the researchers by analyzing test data collected from the identified children in the program. All handicapped children were administered the Peabody Picture Vocabulary Test-III (PPVT-III). This provides a quick assessment of a child's receptive language ability, which is an earlier area of skill development than expressive language. This tool was chosen by the researchers because of its likelihood of

yielding scores for the majority of our identified students, regardless of the severity of their handicapping condition. A standard score of 85 (one standard deviation below the mean) was used as the cut-off for the average range. For each classroom, the percentage of handicapped children falling below the average range was then determined. This data was used to compare the classrooms. Of the 48 handicapped children in the program, 40% fell below a score of 85 on the PPVT-III. Mean ages in all the classrooms were also calculated in order for comparisons. The researchers chose the two classrooms which were most representative of the program as a whole in age and percentage of severely handicapped children, based on PPVT scores.

It should also be noted that of the six classrooms in our program, the two at either extreme of the age range were eliminated based on their ages. Therefore, the classroom with primarily three-year olds and the classroom with kindergarten age children were eliminated from this study. Rationale for the elimination of these two classrooms was from prior research which concluded that older preschool children naturally interact more frequently and in more sophisticated ways than do younger preschool children (Guralnick et al, 1984).

Of the two classrooms chosen, Classroom 1 had a mean age of 57 months with nine boys and three girls. Classroom 2 had a mean age of 56 months with seven girls and five boys. Of the eight peer models, there were 2 boys and 2 girls in each class respectively. There were a total of 6 girls with disabilities and 10 boys with disabilities in the two classrooms combined. Classroom 1 had a mean PPVT-III score of 84.5, with 4 disabled students falling below 85. Classroom 2 had a mean score of 88.5, with 2 of the

disabled students falling below the 85.

The peer models in the two chosen classrooms were targeted to observe their interactions with both typically and atypically developing classmates. All the children in each class have attended school together four days per week for approximately four months, thus they are familiar with one another.

*Instruments/Materials/Apparatus*

We modified an observational coding system, entitled Social Interaction Scan, developed by Odom, et al, 1988. View Appendix for our modified version and code descriptions. The peer models in the two chosen classrooms were the target students for observation. Recorded variables during observations included name of subject, the play area that the subject was in, whether subject was in proximity to handicapped students or other peers, the number of children in the play area, whether the peer was interacting with others, and what type of interaction occurred.

After several trial observations, it was determined that recording observations in the written format resulted in a loss of observation time while the observers looked at the sheet to determine which variables to circle, thus decreasing reliability between observers because of inconsistent recording behaviors. Therefore, it was decided that microcassette recorders should be used to record observations. In this way, the observers could continue to look at the subjects while recording information. Portable, hand-held microcassette recorders were used as cueing devices and to verbally record observations.

*Setting*

Observations were conducted during free play times in each classroom. The adults in each classroom were instructed to keep interaction with the children to a minimum while observation took place. Each class had similar activity centers available in the room with some variation due to weekly themes.

*Procedure*

Observation sessions were conducted in two twenty minute time blocks per week for five weeks. The twenty minutes was divided into 15 second observation intervals per each of the four peer models. This yielded 20 observation intervals per peer, per observation session, for a total of 800 observation intervals.

During the observations, the observer would have two portable hand-held microcassette recorders. One recorder played a prerecorded cueing tape that stated 'find' and then 'record' five seconds later, in fifteen second intervals. The observers used the other microcassette recorder to dictate observations. The order in which the peers in each class were to be observed was predetermined by the researchers to maintain consistency throughout the observations. Each peer was observed once every minute for the fifteen second interval.

Interrater reliability was established by the observers through a series of joint, pre-test observation sessions utilizing videotapes and live observations. Reliability was determined by the number of agreements in the coded variables between the researchers during an observation session. Approximately eight hours of pretest observing occurred to establish reliability. The researchers reached a reliability of greater than 90% during

this state. In order to ensure reliability throughout the study, the researchers conducted 20% of the observations together. Reliability during the study remained high, ranging from 91% to 98%.

## Results

Observation data was summarized by taking frequency counts and dividing by the maximum possible number of intervals for a given parameter, yielding a percentage of occurrence. Chi square tests were applied as needed to determine the significance of differences.

Of primary interest was the percentage of time that the peer models were interacting with their handicapped classmates. The amount of time they spent interacting with other partners (another peer model or a teacher) was also calculated. The nature of the interactions (positive or neutral vs. negative, verbal vs. non-verbal) was examined. The effects of variables, such as play area and group size, on the amount of interactions with handicapped children were also taken into account.

### *Basic Description*

Table 1 indicates that the subjects in this study spent more than half of their time interacting with others in the classroom, namely handicapped children (H), other peer models (P), or teachers (T). Table 2 indicates the amount of interaction time spent with each of these three groups.

Frequency counts presented in Table 2 are as follows: For the 800 observation intervals, there were 213 (H) interactions, 162 (P) interactions, and 80 (T) interactions. There were 345 intervals of no interaction. Thus, when the subjects were interacting,

almost half of their interactions were with handicapped children as opposed to peer models and teachers combined. It was also noted that, peer models, when grouped by gender, were similar in their amounts of interactions with others and in their amounts of interactions with handicapped classmates.

Table 3 indicates that the peer models in the study spent most of their time in play areas where handicapped children were present.

**TABLE 1**

*Interaction vs. No Interaction*

| | |
|---|---|
| Interaction with H, P, T | 56.9% |
| No Interaction | 43.1% |

**TABLE 2**

*Interaction with Whom?*

| | |
|---|---|
| Interaction with H | 26.6% |
| Interaction with P | 20.3% |
| Interaction with T | 10% |
| No Interaction | 43.1% |
| | |
| TOTAL | 100% |

**TABLE 3**

*Proximity Play with Handicapped*

| | |
|---|---|
| Handicapped child present in play area with target peer model | 74.4% |
| No handicapped child present in play area with target peer model | 25.6% |
| | |
| TOTAL | 100% |

*Types of Interactions*

The overwhelming majority of interactions observed were either positive or neutral, as opposed to negative. In fact, the frequency count indicates that only 7 of the 455 interactions were recorded as negative interactions, while 448 were positive or neutral. Because there were so few negative interactions, they were not analyzed in detail.

Tables 4a and 4b show the proportion of verbal vs. non-verbal interactions observed. There were 389 verbal interactions observed, as opposed to 66 non-verbal interactions (see Table 4a). Table 4b shows that within the relatively few non-verbal interactions, more of them were with (H) than with (P) and (T), and about twice as many involved male subjects as female subjects. These differences were significant both for (H) vs. (P) and (T), and for gender of the subjects ($p < .05$).

**TABLE 4a**

*Verbal vs. Non-Verbal Interactions*

| | |
|---|---|
| Verbal Interaction | 48.7% |
| Non-Verbal Interaction | 8.2% |
| No Interaction | 43.1% |

**TABLE 4b**

*Who participated in Non-Verbal Interactions?*

| | |
|---|---|
| Male Subjects | 63% |
| Female Subjects | 37% |
| Interacting w/H | 69.7% |
| Interacting w/P | 30.3% |

*Play Area as a Variable*

For purposes of this analysis, play areas were divided into five different sets. The groupings were based on similar types of activities, whether or not they were actually located in physical proximity in the classroom:

**Play areas/set 1 (pa1)** - *Art and Manipulative*

This area consisted of the art table, sensory table, and tabletop toys such as puzzles and simple board games.

**Play areas/set 2 (pa2)** - *Construction*

This play area consisted of various kinds of blocks and a workbench.

**Play areas/set 3 (pa3)** - *Dramatic Play*

This area entailed the housekeeping area, dress up clothes, the rocking boat, and specific areas to go with weekly themes.

**Play areas/set 4 (pa4)** - *Quiet and Investigative Learning*

This area had reading and writing areas, a computer, science table, and a quiet area.

**Play areas/set 5 (pa5)** - *"None of the above"*

This area was for areas that did not fit into the four preceding categories, or for intervals when a child was either in transit or not available due to bathroom use or hand washing. The children spent differing amounts of time in each set of play areas, with play areas/set 3 (dramatic play) being frequented most often (31% of the time), and play areas/set 5 ("none of the above") the least often (11% of the time).

The percentages in Table 5a show what portion of time subjects were interacting with others, out of the total amount of time that was spent in a given set of play areas.

Table 5b gives a similar measure, except that this time only interactions with handicapped children were considered.

**TABLE 5a**

Percent of Interaction Time Out of Total Time Spent in Each Set of Play Areas*

| | | |
|---|---|---|
| pa1 | Art/Manipulative | 48.9% |
| pa2 | Construction | 58.4% |
| pa3 | Dramatic Play | 61.3% |
| pa4 | Quiet/Investigative | 74.8% |
| pa5 | None of the Above | 36% |

**Compare to percentage of interaction time for all 800 intervals (56.9%)*

**TABLE 5b**

Percent of Interaction Time with (H) Out of Total Time Spent in Each Set of Play Areas*

| | | |
|---|---|---|
| pa1 | Art/Manipulative | 17.6% |
| pa2 | Construction | 38.6% |
| pa3 | Dramatic Play | 27.8% |
| pa4 | Quiet/Investigative | 43% |
| pa5 | None of the Above | 8.2% |

**Compare to percentage of interaction time with (H) for all 800 intervals (26.6%)*

*Group Size as a Variable*

Group size was divided into three types, depending upon how many other children were in a particular play area with the target child. Group size 1 was for isolate play, group size 2 was for dyads, and group size 3+ meant that three or more children were together in a play area. It was interesting to note that, when defining group size this way, the subjects spent more than half of their time in group size 3+ (see Table 6).

**TABLE 6**

Time Spent Playing in Isolate, Dyads, or Groups of 3 or More

| | |
|---|---|
| Group Size 1 | 15.9% |
| Group Size 2 | 24% |
| Group Size 3+ | 60.1% |
| | |
| TOTAL | 100% |

As would be expected, interactions with other children were minimal in the group size 1 condition. Due to the makeup of the classes, a peer model in a dyad had a greater probability of being with a handicapped child than with another peer model. Whether or not the children were interacting was of most interest in this study. It was found that interactions with (H) were more likely to occur in group size 2 (37% of the time) than in group size 3+ (29.4% of the time).

## Discussion

Both subjective observations and research efforts give testimony to the benefits of having typically developing peers in programs for disabled preschool children (Guralnick, 1981a; Guralnick, 1990b). Much of the research to date has focused on programs that involve formal training programs for peer models (Goldstein, 1993; Odom, Strain, Karger, & Smith, 1986). However, most teachers prefer approaches that are more naturalistic (Odom, McConnell, & Chandler, 1984), such as the incidental facilitation of interactions used by the teachers in this investigation. The interactions between the peer models and handicapped children in this program were studied in order to have a cursory

measure of the amounts and types of their interactions. While the data gathered supports the notion that the peer model subjects make a positive contribution to the program, as measured by their interactions with the handicapped children, it also raises further questions.

The peer models in this study spent 15.9% of their time in group size 1, or isolate play. This amount of time in isolate play is slightly less than the 20% figure given by van den Pol, et al (1985) for their observations in a typical preschool. The peer models were interacting during 56.9% of the observation intervals, which is not too different from the finding by Greenwood, et al (1981) that preschoolers interact about half of the time during play. The above information indicates that our subjects are not spending more time in isolate play, or less time interacting, than is normal, despite the fact that most of their potential partners for play and interacting are handicapped children.

The interaction time of the peer models was broken down further by interaction partners, showing that 26.6% of their time was spent interacting with handicapped children, 20.3% with other peer models, and 10% with teachers. Thus, on a positive note, almost half of their interactions were with handicapped children. The subjects did not spend a disproportionate amount of time in teacher interactions, which sometimes is the case for peer models (Weiss and Nakamura, 1992).

As supported by our findings, previous research has shown that handicapped children participate in fewer interactions than typically developing peers (Guralnick & Weinhouse, 1984; Beckman & Kohl 1987). Given the ratio of handicapped children to peers in our program (two handicapped children to one peer model), perhaps the number

of interactions with handicapped children could be increased. Further investigation is needed to determine the most effective way of accomplishing this. Possibly more aggressive peer training, as done by Goldstein (1993) or Odom et al (1986) could be used to supplement the naturalistic methods currently being utilized. Or it may be that the developmental level of some of the handicapped children necessitates stronger training in appropriate use of toys and basic interactions with adults, skills which children must have before learning to interact with peers (Field et al, 1980).

The variables of group size and play area provided both expected and unexpected results. Information from Guralnick (1990a) supports the notion that there would be more interactions with handicapped children in dyads than in larger groups. The findings of Lowenthal agree with results of the present study, which show dramatic play is an area of high interaction (1996). One unexpected result was the rather high percentage of interactions with handicapped children in the quiet/investigative areas. It can be speculated that the relatively poor communication and/or motor skills of the handicapped children may have impacted them less here than in areas such as dramatic play, construction, or art. It was also noted that these areas tended to be small in size, containing smaller groups of children in close proximity to one another, things that enhance chances of interaction (Chandler, Fowler, & Lubeck, 1992; Lowenthal, 1996). Additionally, the quiet/investigative areas may have provided a natural opportunity for peers to assume a leadership role in showing new skills to their handicapped classmates.

Some of the data that was gathered during this investigation was not discussed for purposes of this study, but may be utilized for later research. For example, differences

between interactions in Class 1 and Class 2 may later be utilized to help try to identify characteristics that are common to effective peer models. In the present study, the analysis of play areas as a variable, particularly the low interaction rate found in play areas/set 5, would lead to the tentative conclusion that a child who spends a lot of time in transit between play areas would be less interactive and less effective as a peer model.

In conclusion, here is a summary of results which may be of use to practitioners in special education preschool programs. These results may or may not be generalizable, depending upon factors such as degree of similarity to the population in this study. It was concluded that with incidental facilitation of interactions, peer models in a special education preschool, where the majority of the children are handicapped, were at least as interactive as typical children in a regular preschool. About half of their interactions were with handicapped classmates, and the other half were with other peer models and teachers combined. Analysis of group size indicated that play in dyads may enhance the likelihood of interactions with handicapped children. Examination of play areas revealed that the dramatic play, construction, and quiet/investigative areas were most conducive to interactions, particularly those with handicapped children.

# Appendix

## Observational Coding System

1. Name of Subject

2. Play Area

3. Proximity Information (for handicapped students or other peers)

   Proximity:

   Child is within the same play area as other children. The child is either engaged or not engaged in play with other children in his or her proximity.

4. Group Size

   The number of children for each interaction is noted. If the target child is in isolate play, group size of 1 is recorded. If proximity with one other child is observed, group size of 2 is recorded. If the target child is with two or more other children, group size of 3+ is recorded.

   Isolate:

   The target child is either playing alone or not engaged in an activity. The child is not sharing a play area with another child or children.

5. Whether or not subject is engaged in interaction, with whom, and type of interaction.

   Teacher Interaction:

   Child is engaged in a social interaction with the teacher/adult in the room.

   Child Interaction:

   Child is interacting positively or neutrally with another child and verbally

or nonverbally. The target child may be talking about a play activity, sharing a toy, interacting with another child with a toy, (i.e. crashing cars), playing a chasing game, listening to another child speaking directly to him/her, etc. When recording interactions, it is noted whether the child is interacting with a handicapped classmate or another peer model.

Positive/Neutral or Negative Interaction:

If the child is interacting negatively with another child, this is noted. Examples of negative interactions include: hitting, biting, taking a toy from a peer, making a negative statement (i.e. NO, STOP), verbally teasing or taunting another child, making faces, etc. All other interactions are considered positive/neutral.

Verbal or Non-Verbal Interaction:

If words are being used with apparent communicative intent, a verbal interaction is noted. Interactions that do not involve words are considered non-verbal.

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# The Effect of Oral vs. Written Instructional Methods on Proficiency in Spanish Classes

Dave Nemecek

Abstract

The purpose of this study was to determine whether there is a significant difference in students' understanding of Spanish as a foreign language between those students who spent additional time on writing practice as opposed to other students who had additional practice speaking in Spanish. A pre-test post-test design with a control group and two treatment groups was used involving high school juniors and seniors enrolled in Spanish IV. It was found that after 35 interventions (treatments) over a period of three months, students who had additional practice writing had an average of 84% for a semester grade. The students with additional oral practice scored an average of 81% for a semester grade and the control group averaged 83%. The conclusion was that there was no significant difference observed in emphasizing writing instead of speaking (or vice versa) in the classroom in order to improve a student's overall understanding of the language.

Key words: Advanced Placement, College Board, oral proficiency, writing proficiency, concept development, microcassette recorders, grammatical constructs, communication, effectiveness, survival skills.

## Introduction

Numerous dialogues in current years between this author and various colleagues at the secondary and post-secondary levels have focused on one particular issue, that the push for oral proficiency is often at the cost of written proficiency. While university professors may find that students are coming from the secondary schools well prepared for conversational practice, they are not equally skilled in the writing area. This shortcoming is even more apparent as most university Spanish courses demand a significantly higher level of writing proficiency than high school courses. Numerous university course listings for Spanish on the Internet reflect an importance given to written work in Spanish in those courses.

Most recently, Educational Testing Service has modified the Advanced Placement Tests for Foreign Language by increasing the weighting of the sections involving writing while reducing the weighting given the sections involving oral proficiency.

Oral proficiency has been the predominant goal in foreign languages in the past ten years. One look at Spanish textbooks, American Association of Teacher of Spanish and Portuguese Conversion Sessions, NEO-Day offerings, etc. to see the emphasis on oral language instruction and not written instruction. The results of this approach to foreign language instruction appear to include not only a diminished skill level of the student in regard to communicating in written form, but also in a lower interest level in exploring great works of literature for educational and recreational purposes.

The oral proficiency approach puts more emphasis on spontaneous, unrehearsed communication. Errors are to be expected and are accepted. The student grasps the fundamental structure factors of the language enabling him or her to communicate on a basic level. Some teachers refer to this approach as one that teaches "survival skills" but little else. However, there seem to be other approaches.

With a writing approach, the student is able to reflect on what vocabulary and what grammatical structures are necessary to communicate in an effective, accurate, and meaningful way. With continued practice, the student becomes more aware of how to manipulate the language and gradually begins to establish a connection between the foreign language and his or her own language.

As an example, Latin is no longer a common course offered at the high school level. The parents and grandparents of today's students often comment that these students do not have an understanding of how their own language works, nor do they connect the multitude of vocabulary terms in English with their Latin origins. The result is that today's youth may be able to communicate orally, but they do not understand why certain grammatical structures exist as they do. They tend to have a command of certain vocabulary words, but the vocabulary that is used is not what one would call extensive.

Writing is a process that clarifies thinking and which results in a permanent product. Higher level thinking rests on the ability to mediate words. There are no concepts for which there are no words.

Carrell and Moore (1993) explore the outcomes of different writing assignments based on varying personality traits and individual learning styles such as orderliness versus flexibility, introversion versus extroversion, concrete thinking versus abstract thinking, etc. They find that the differences in personalities from student to student might affect the quality of certain types of writing assignments. A creative thinker, for example, may be more enthusiastic about an essay on the U.S. government being run by extra-terrestrials, whereas a concrete thinker would excel on a topic concerning Reaganomics and its effects on international trade.

By the same token, it may be inferred that certain students due to their learning styles, might find communicating on a written basis to be more attractive than through oral response. The writing process may enable some students to express themselves in the foreign language to a level that is not met in oral practice.

Green (1993) refers to a lack of research done regarding student perceptions of an oral proficiency approach to a foreign language learning. In his studies, he finds that although students view communicative activities in a classroom as more entertaining or enjoyable than a "traditional" approach, they are of the opinion that they do not learn the material at a higher level. Green does mention that he feels that a student's enthusiasm in a class may have a positive effect on that student's progress.

Dybdahl (1992) offers suggestions for the development of short composition topics for class and emphasizes the importance of student opinion in the selection of

topics. One can infer that in a written exercise, a student may develop an approach to a theme that interests him or her, but in a conversational situation, a student may feel obligated to adjust his or her treatment of a topic, or even the topic itself in order to keep the other participant from becoming bored while listening.

This study asks the following question: Is there a significant difference in the average classroom performance of students who get oral reinforcement, written reinforcement in Spanish class, or traditional (control) instruction?

## Method

For the period of nine weeks coinciding with the third nine week grading period of the school year, 21 students (GROUP A) in the first period Spanish IV class and 21 students (GROUP B) in the seventh period Spanish IV class were the subjects of this study. GROUP C was a control group of 26 students enrolled in the third period Spanish IV class.

Each student in all groups was assigned a student identification number and used this number to identify himself or herself. The instructor used these numbers instead of names to track the progress of each student.

On a regular basis (three to five times per week), GROUP A wrote short paragraphs of three to five sentences (25 to 30 words) on a given topic. The topic was given at the beginning of the class period after attendance had been taken. The topic was, at times, related to something previously studied by the students. The instructor chose

from topics of cultural and historical interest found in a random selection of intermediate foreign language textbooks, themes and current events from news articles found in newspapers published in the target language, advertisements from magazines and other sources written in the target language, and an assortment of interview questions inquiring into the daily events and activities of the student. Topics were those which were pertinent and appropriately relevant to the students' educational background and previous studies. One third of the total number of topics was given orally to the students, one third of the topics was given in picture form (either on paper or on an overhead projector), and one third of the topics was given in written (sentence) form. Students were limited to a period of two minutes of mental preparation upon receiving the topic, and then had not more than eight minutes to write their responses. Students identified themselves on their paper by their identification numbers.

GROUP B received the same topics as GROUP A and received them in the same way, but instead of writing their responses, each student used a microcassette recorder to record themselves stating the response in the foreign language. Students were limited to a period of two minutes of mental preparation upon receiving the topic, and then had not more than five minutes to record their responses onto the microcassette recorders. Students identified themselves on their cassettes by their identification numbers. Each student had a recorder to use.

GROUP C had no additional activities in which to participate. This group followed the same curriculum as the other groups, but did not participate in the oral or written exercises done by the other groups.

From each activity session, the instructor randomly chose three written papers from GROUP A and three microcassettes from GROUP B for evaluation. The instructor used the following guidelines or rubrics for evaluation, which were the rubrics designed by the College Board for evaluation of Advanced Placement examinations:

SPANISH LANGUAGE: COMPOSITION

9 DEMONSTRATES SUPERIORITY

Presents coherent treatment of the topic with clearly developed ideas. Has strong control of syntax and superior command of vocabulary and use of verb tenses. Demonstrates appropriateness and ease of expression. A few basic grammatical errors may occur. Firm command of conventions of the written language (orthography, paragraphing, sentence structure and punctuation) is apparent.

8 to 7 DEMONSTRATES COMPETENCE

Expresses well articulated ideas on the topic. Has generally correct syntax and good use of vocabulary and verb tenses. Communication not greatly hampered by interference from another language. More than a few basic

grammatical errors may occur, particularly in complex structures. Orthography and other conventions of the written language are generally correct.

6 to 5 SUGGESTS COMPETENCE

Conveys some ideas on the topic. Demonstrates basic grasp of syntax and use of verbs. Uses adequate vocabulary. Communication may suffer from interference from another language. Frequent errors may occur in grammar although simple structures are usually correct. Frequent errors in orthography or other conventions of the written language may be present.

4 to 3 SUGGESTS INCOMPETENCE

Includes poorly expressed ideas. Shows lack of control of syntax and verb tenses. Communication may be impeded by inadequate vocabulary, interference from another language, or pervasive errors of orthography. Constant basic errors of grammar.

2 to 1 DEMONSTRATES INCOMPETENCE

Shows no clear grasp of the topic and/or ability to communicate ideas. Includes persistent errors in syntax, vocabulary, grammar and orthography or interference from another language, which lead to almost incomprehensibility.

## SPANISH LANGUAGE: ORAL SECTION[1]

9 DEMONSTRATES SUPERIORITY

Very good to excellent command of the language. Very few errors of syntax. Wide range of vocabulary, including idiomatic usage. High level of fluency.

8 to 7 CLEARLY DEMONSTRATES COMPETENCE

Good command of the language. Few errors of syntax. Above average range of vocabulary. Good idiomatic usage and little awkwardness of expression. Good fluency and intonation.

6 to 5 SUGGESTS COMPETENCE

Comprehensible expression. Some serious errors of syntax and some successful self-correction. Some fluency but hesitant. Moderate range of vocabulary and idiomatic usage.

4 to 3 SUGGESTS INCOMPETENCE

Poor command of the language marked by frequent serious errors of syntax. Limited fluency; poor pronunciation. Narrow range of vocabulary, and of idiomatic usage. Frequent anglicisms and structure which force interpretation of meaning by the listener. Occasional redeeming features.

2 to 1 CLEARLY DEMONSTRATES INCOMPETENCE

Unacceptable from almost every point of view. Glaring weaknesses in syntax and pronunciation. Few vocabulary resources. Little or no sense of idiomatic usage.[2]

Evaluation was of the sample given within the time constraints. If the student showed an ability to communicate, then no evaluation loss was incurred from an inability to fully complete the communicative function.

No one individual student's work was evaluated more than five times. In order to ensure a more reliable balanced random sample, no more than five of a particular student's entries were considered for evaluation. Any evaluations of these exercises were not included in the student's grade for the course.

The questions or topics used in this study included the following:

- Explain to a friend who lives in the tropics what winter is like in northern Ohio.
- Tell about a favorite sport.
- List the most attractive features of what you consider to be your favorite car.
- Give a summary of how you celebrated your most recent birthday.
- Describe the best book you have ever read.[3]
- Describe what your fears and/or desires were as a child.
- Tell about what you would recommend to a friend who has a major test tomorrow morning and also has a ticket to a baseball game tonight.
- Explain what you would consider to be possible improvements for our society and how these improvements could happen.
- Explain to a friend what is necessary for entering a university.
- Describe the most comfortable room in your house.

## Results

The following descriptive information is based on student demographic information and pretest scores from the first semester. The mean scores of each of the three classes for the first semester grade served as the baseline data. Baseline scores were established by calculating mean scores of five unit tests taken during the first semester in Spanish IV (see Table 1). Margin of error test scores is ±1% due to rounding of decimals.

**TABLE 1**

| | **GROUP A written** | **GROUP B oral** | **GROUP C control** |
|---|---|---|---|
| # of students | 22 | 21 | 26 |
| # Male | 9 | 9 | 11 |
| % Male | 41% | 42.8% | 42.3% |
| # Female | 13 | 12 | 15 |
| % Female | 59% | 57.1% | 57.7% |
| # Non-Minority | 21 | 17 | 22 |
| Non-Minority Average Grade | 78.7% | 81.5% | 79.7% |
| # Minority Students[4] | 1 | 4 | 4 |
| Minority Above Average | 79.8% | 77.7% | 80.3% |
| Class Average Grade | 79% | 80.5% | 79.4% |
| Male Average Grade | 82.1% | 79.4% | 85.3% |
| Female Average Grade | 76.5% | 81.8% | 75.7% |

The baseline data was used to determine if the two treatment groups and one control group were initially equivalent before the treatments began. Pretest (baseline) was the average of five unit test scores earned during the first semester. For the pre-test, the following data was generated as can be seen in Table 2.

**TABLE 2**

| GROUP | Number of Subjects | Average Semester Score | Standard Deviation | Minimum Score | Maximum Score |
|---|---|---|---|---|---|
| GROUP A (oral) | 21 | 79.0333 | 8.5637 | 62.1 | 95.9 |
| GROUP B (written) | 21 | 80.4738 | 11.7979 | 53.0 | 99.0 |
| GROUP C (control) | 26 | 79.4154 | 12.5566 | - 60.0 | 103.0 |
| **TOTAL** | 68 | 79.6243 | 11.0736 | 53.0 | 103.0 |

The means of the three groups were extremely close: 79.0333, 80.473, and 79.4154 for GROUPS A, B, and C respectively. The Standard Deviation shows that GROUPS B and C are more variable in performance than GROUP A.

This author realizes that the two groups were not exactly equivalent but within the constraints faced by real-life teachers, the random assignment of students to each group was not feasible. Exploratory analysis of the pre-test results revealed that if three subjects with extreme scores were dropped, means seemed more equivalent. Therefore,

prior to analysis of post-test results, these three subjects were dropped from the study.

A one-way ANOVA with one factor was used for the data analysis for the post-test results of the three groups. The factor was their average second semester score. The F value for the one way analysis of variance was not significant at the .05 level. The differences between the three group means 84.0476, 80.9524, and 83.1538 could easily be accounted for by chance (see Table 3). Data analysis of student performance during the treatment phase is presented in Table 3.

**TABLE 3**

| Source | D.F.[5] | Sum Squares | Mean Squares | F Ratio[6] | F Prob. |
|---|---|---|---|---|---|
| Between groups | 2 | 107.4606 | 53.7303 | .3218 | .7260 |
| Within groups | 65 | 10853.2894 | 166.9737 | | |
| TOTAL | 67 | 10960.7500 | | | |

| GROUP | Count | Mean | Standard Deviation |
|---|---|---|---|
| GROUP A (oral) | 21 | 84.0476 | 14.7732 |
| GROUP B (written) | 21 | 80.9524 | 12.1551 |
| GROUP C (control) | 26 | 83.1538 | 11.8885 |
| TOTAL | 68 | 82.7500 | 12.7904 |

## Discussion

There was found to be no significant difference as a result of the change of emphasis from one class to another regarding oral and written exercises. Perhaps if this

study were replicated in a situation where students would spend two years (rather than a single semester) writing or using oral language techniques, a significant difference would become more apparent. The development of a foreign and self-expression in a foreign language take a long time to emerge. Given the results of this study, we can conclude that four and one-half months of exposure to writing versus oral language instruction may not be enough to effect a change in student performance.

Daily observations did reveal some interesting changes in selected students' behaviors. Each of these observations of changed behavior provides opportunities for future investigations in foreign language classrooms.

In this author's experience, female students tend to be less assertive when participating orally in class. However, several of the female students began to respond orally more often than they had before the opportunity to practice with recorders.

In contrast, several male students in GROUP A (written practice) became more adept at writing as the sessions continued. The average length of a writing sample by a male in the first few writing exercises was 20 to 30 words. After thirty writing exercises, the average length increased to 40 to 50 words. Perhaps some of the increase can be attributed to the students' ability to adjust to the limits of the time constraints. It is possible that an increased comfort level with the ability to express themselves accounts for the increase. The writing by females wrote at an average of 50 to 60 words per exercise, but they began with a higher average of 40 to 50 words. Using the Advanced

Placement rubrics mentioned earlier in this article, the overall rating of the writing samples was at a higher level for females than for males both at the beginning and at the end of the sessions.

In general, overall writing skills improved slightly for various students in the writing group. Using the Advanced Placement rubrics, students in GROUP A whose papers were selected for evaluation received an average score of three to four at the beginning of the sessions. After thirty sessions, the average score was 4 to 5. It is important to note that only three writing samples were selected at random from each exercise for evaluation after each session, meaning that by no means, is this increase a definitive reflection of actual changes in the quality of writing for the group as a whole.

Student reaction to participating in this research was positive in most cases. The students who had the opportunity to practice with the cassette recorders were very enthusiastic about the procedure; they considered the activity to be fun. On the other hand, the students who had the writing exercises found these exercises to be often nothing more than an extension of other course responsibilities.[7]

As a side note, the cassette recorders were also helpful in the Spanish V course, as these students must speak within certain time constraints for their Advanced Placement examinations. The recorders were used to practice for this type of testing requirement. An added benefit to the students in GROUP B (oral practice) who continue on to Spanish V is that they will have had additional practice with the cassette recorders.

Since the cassette recorders constituted a large monetary investment, the author limited the classroom use of these instruments to only advanced level students. Students were thoroughly instructed about the care and use of the machines in class and no damage or loss was suffered throughout the semester.

The results of this study led to some interesting questions about the varying impact of different classroom practices (oral versus written) particularly on male versus female students. This study showed no significant difference among the groups as a result of the activities, but perhaps a difference would be apparent if the time for learning and exercises were increased. Another factor may have been the time of day at which the intervention took place. Writing exercises were given in the first period of the day, when some students may not yet be as mentally alert; oral practice occurred at the end of the day when some students suffer from mental fatigue. Another possibility is that the effects of the exercises might not become apparent until later on in the subjects' scholastic career - perhaps in a later course such as Spanish V or in a college literature course.

Although this study showed no significant difference in the concept development among the various groups, this author will pursue these investigations to see if the results would be any different as a result of a more extensive series of written and oral exercises. There will also be studies to investigate whether there is a tendency for female students in a Spanish class to be more adept at writing in Spanish than males, and determine if their speaking skills can be more effectively developed through repetitive use of the micro-

cassette recorders in class on a regular basis. The writing skills of male students may be affected at a different level than those of the female students by numerous exercises in class. In any case, any additional practice in Spanish, either in a written or spoken form, will only serve to enable the student to be more confident in his or her future studies.

[1] There are two evaluation guides for the Advanced Placement Spanish Language Examination. The one included here is for the picture sequence section of the examination, which requires the student to speak for an extended period of time. The other rubric is used to evaluate short oral responses of 20 seconds or less.

[2] These rubrics come from 1993 AP Spanish Language: Free Response Scoring Guide with Multiple-Choice Section, pp. 51-55.

[3] This topic was difficult for many of the students involved in this study since they are more video-oriented and tend not to read books.

[4] Note: Minority in this study was defined as *non-Caucasian*. It included African, Indian, and Asian students of foreign and of American descent. Both minority and non-minority groups may have included foreign born students. No Native Americans were members of either group. The number of minority students is small, but the percentage enrolled in Spanish IV generally reflects the minority percentages of the entire student body.

[5] Degrees of freedom.

[6] The F value was not significant at the .05 level.

[7] Several students in the writing group did comment that as the semester progressed, they were able to manage their time better when writing for tests and exams.

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